

Attached is one complete set of exhibits to  
the depositions of:

Walter Amory, 10/1/81

John Bean, 10/2/81

Dan Christy, 10/5/81

Except Amory Deposition Exhibit 1, which is a large map entitled  
"Water Department Town of Southington Map of Paravella Farm  
Showing Location of Test Wells," dated June 1965.

1 (Discussion off the record)

2 (Short recess taken)

3 CROSS EXAMINATION

4 BY MR. CAREY:

5 Q. Mr. Amory, I am Austin Carey. I represent  
6 some of the parties who have intervened as private  
7 parties in this lawsuit in Connecticut, generally a  
8 public interest organization which has a protective  
9 interest in the environment.

10 Do you have an opinion as to the source of  
11 the organohalides in Well No. 6?

12 MR. KELLEY: I think we should establish  
13 whether or not he feels he has adequate factual  
14 basis to base such an opinion on.

15 MR. CAREY: Well, I asked him if he has an  
16 opinion.

17 A. I have a number of opinions. The trouble  
18 is that I cannot put them together and stand behind  
19 them without some additional information.

20 Q. I take it, then, that your information is  
21 inadequate to form an opinion as to the source of  
22 the pollution in Well No. 6?

23 A. I am afraid so -- the information that I  
24 have been privy to see.

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1 Q. Is the same true, then, of Well No. 4?

2 A. I would say yes.

3 MR. CAREY: I have no questions beyond  
4 those. Thank you.

5 MR. KELLEY: I have no questions.

6 MR. BLUMSTEIN: I have no questions.

7 MR. RODBERG: Mr. Amory, earlier, off the  
8 record, I explained the procedure with respect to  
9 reading and signing. You have indicated to me that  
10 it is your intention to obtain the transcript of the  
11 proceedings today, review them, read them, make  
12 whatever corrections you feel are necessary, if any,  
13 sign it, and return it as you will be instructed by  
14 the reporter in the cover letter.

15 THE WITNESS: Yes.

16 (Discussion off the record)

17 MR. RODBERG: Thank you.

18 (Whereupon, the proceeding  
19 concluded at 3:06 p.m.)  
20  
21  
22  
23  
24

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## C E R T I F I C A T E

I, Walter Amory, do hereby certify that I have read the foregoing transcript of my testimony, and further certify that said transcript is a true and accurate record of said testimony.

Dated at \_\_\_\_\_, this \_\_\_\_ day of \_\_\_\_\_, 1981.

Sworn and subscribed to before me this \_\_\_\_ day of \_\_\_\_\_, 1981.

\_\_\_\_\_  
Notary Public

My Commission expires:  
\_\_\_\_\_

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COMMONWEALTH OF MASSACHUSETTS)

SUFFOLK, SS. )

I, Rosanna Del Guidice, Registered Professional Reporter and Notary Public in and for the Commonwealth of Massachusetts, do hereby certify that there came before me on the 1st day of October, 1981, at 10:03 a.m., the person hereinbefore named, who was by me duly sworn to testify to the truth and nothing but the truth of his knowledge touching and concerning the matters in controversy in this cause; that he was thereupon examined upon his oath, and his examination reduced to typewriting under my direction; and that the deposition is a true record of the testimony given by the witness.

I further certify that I am neither attorney or counsel for, nor related to or employed by, any attorney or counsel employed by the parties hereto or financially interested in the action.

In witness whereof, I have hereunto set my hand and affixed my notarial seal this 12th day of October 1981.

  
Notary Public  
My commission expires: June 25, 1987

Doris O. Wong Associates, Inc.

31 Milk Street, Boston, Massachusetts 02109  
Telephone (617) 426-2432

Professional Shorthand Reporters  
Notaries Public

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October 12, 1981

Walter Amory, PE.  
P.O. Box 1768  
Duxbury, MA. 02332

Re: USA vs. Solvents Recovery Service  
of New England  
Deposition of: Walter Amory

Dear Mr. Amory:

Enclosed please find your deposition taken in the above-referred to matter on October 1, 1981, at the Holiday Inn Government Center, Boston, Massachusetts.

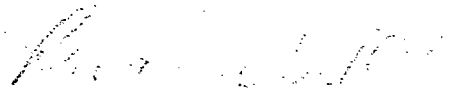
Would you read and sign your deposition before any notary, and then return same to Attorney Rodberg, as requested by Counsel.

If you have any suggested corrections, please make them on a separate sheet of paper, indicating the page, line number, and the suggested correction. Please do not mark up the deposition.

Your cooperation in this matter would be greatly appreciated.

Very truly yours,

DORIS O. WONG ASSOCIATES

  
Rosanna Del Guidice, RPR

Enc.

cc: Michael L. Rodburg, Esq.  
Joel Blumstein, Esq.

*Rec'd  
10/16/81  
Legal Review*

UNITED STATES DISTRICT COURT  
DISTRICT OF CONNECTICUT

0006666

-----X  
UNITED STATES OF AMERICA, :  
Plaintiff, :  
 :  
vs. : Case No. H-79-704  
 :  
SOLVENTS RECOVERY SERVICE OF :  
NEW ENGLAND, :  
Defendant. :  
-----X

DEPOSITION of WALTER AMORY, a witness called on behalf of the Defendant, taken pursuant to the Federal Rules of Civil Procedure, before Rosanna Del Guidice, Registered Professional Reporter and Notary Public in and for the Commonwealth of Massachusetts, at the Holiday Inn, Government Center, Boston, Massachusetts 02114, on Thursday, October 1, 1981, commencing at 10:04 a.m.

PRESENT:

Joel Blumstein, Esq., Environmental Protection Agency,  
Region I, JFK Federal Building, Government Center,  
Boston, Massachusetts 02203, for the Plaintiff.

Lowenstein, Sandler, Brochin, Kohl, Fisher & Boylan  
(by Michael L. Rodberg and Marion Percell, Esqs.),  
65 Livingston Avenue, Roseland, New Jersey 07068,  
for the Defendant.

David P. Kelley, Esq., 25 Berlin Avenue, Southington,  
Ct. 06489, for the Board of Water Commissioners  
for the Town of Southington.

Hoppin, Carey & Powell (by Austin Carey, Jr., Esq.),  
266 Pearl Street, Hartford, Ct. 06103, for the  
Connecticut Fund for the Environment, et al.

\* \* \*

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31 MILK STREET, BOSTON, MASSACHUSETTS 02109

TELEPHONE: 426-2432

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Attorneys Notes

Doris O. Wong Associates



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I N D E XDeposition of:DirectCross

Walter Amory  
 (by Mr. Rodberg)  
 (by Mr. Carey)

4

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\* \* \*

E X H I B I T S

Amory  
No.

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Doris O. Wong Associates

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*Doris O. Wong Associates*

\* \* \* \* \*

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## P R O C E E D I N G S

WALTER AMORY

a witness called for examination by counsel for the Defendant, being first duly sworn, was examined and testified as follows:

## DIRECT EXAMINATION

BY MR. RODBERG:

Q. Mr. Amory, would you state your full name, please, and spell it.

A. Walter Amory, W-a-l-t-e-r, A-m-o-r-y.

Q. Where do you reside, Mr. Amory?

A. [REDACTED] M [REDACTED]

Q. My name is Michael Rodberg. I'm an attorney with the firm of Lowenstein, Sandler, Brochin, Kohl, Fisher & Boylan. In this lawsuit, we are the firm that represents the defendant corporation, Solvents Recovery Service of New England, Inc. You have been subpoenaed to appear here today to testify in this proceeding, which is what we call a deposition.

Have you ever been deposed before?

A. Yes, I have.

Q. Can you tell me on how many prior occasions you have been deposed?

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1 A. One.

2 Q. Just to refresh your recollection of how  
3 this proceeding works, I will be asking you a series  
4 of questions. You have been placed under oath by  
5 the reporter. Other attorneys here who represent  
6 other parties to the litigation may, from time to  
7 time, interpose objections or make certain  
8 statements for the record. With respect to my  
9 questions, if you don't understand a question,  
10 please so indicate to me and I will try to clarify  
11 my meaning.

12 I take it today you are not represented by  
13 separate counsel in any way?

14 A. That is correct.

15 Q. Do you have any questions about how we are  
16 going to proceed?

17 A. No.

18 MR. CAREY: Can I ask a question, in light  
19 of your question?

20 MR. RODBERG: Sure.

21 MR. CAREY: You asked if he was represented  
22 by separate counsel. Are you represented by any  
23 counsel?

24 THE WITNESS: As Walter Amory, I am not

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1 represented by any counsel.

2 MR. CAREY: Are you represented in any way  
3 by counsel --

4 THE WITNESS: The --

5 MR. CAREY: -- here today.

6 THE WITNESS: The attorney for our client,  
7 Southington Water Works Department, is David Kelly.

8 MR. CAREY: Are you represented by him?

9 THE WITNESS: I am not represented by him,  
10 no.

11 MR. CAREY: Thank you.

12 BY MR. RODBERG:

13 Q. Mr. Amory, by whom are you employed?

14 A. Amory Engineers, PC.

15 Q. How long have you been employed by Amory  
16 Engineers, PC?

17 A. Since 1973.

18 Q. Did the firm known as Amory Engineers, PC.,  
19 go by any different name at any other time?

20 A. Yes, it did.

21 Q. What was that name?

22 A. Walter Amory Consultant Engineers.

23 Q. When did the name change occur?

24 A. Approximately two years ago.

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1 Q. Today who are the principals of -- I will  
2 call it your firm?

3 A. Walter Amory.

4 Q. Have you been the sole principal since 1973?

5 A. Yes.

6 Q. What is the business of Amory Engineers,  
7 PC.?

8 A. We are civil engineers consultants.

9 Q. How many professional engineers are on your  
10 staff today?

11 A. There are four.

12 Q. Has that number changed since 1973?

13 A. Yes, it has.

14 Q. Just since '73, tell me how many  
15 professionals you had on staff since '73, breaking  
16 it up to the total of four today?

17 A. I founded the firm in 1973 as the only  
18 registered professional engineer. In 1974, another --  
19 one additional professional engineer joined the firm.  
20 In 1975, a second professional engineer joined the  
21 firm. That brings it up to three, including myself.  
22 And then in 1976, a third professional engineer  
23 joined the firm, making a total of four professional  
24 engineers.

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1 Q. Could you briefly state for me your  
2 educational background.

3 A. Yes. I graduated from Harvard College in  
4 1945 with a B A. Then I graduated from what was  
5 then known as the Harvard Graduate School of  
6 Engineering, with an MS in civil engineering, in  
7 1947.

8 Q. Have you, since 1947, had any postgraduate  
9 courses?

10 A. No, I have not.

11 Q. Trace for me, please, briefly, your work  
12 experience, commencing with 1947, and concluding  
13 with 1973, when you founded Walter Amory Consultants.

14 A. 1947 to 1951, I was employed by Jackson and  
15 Moreland Engineers, as a senior draftsman and a  
16 structural designer.

17 1951 to 1953, U.S. Navy. 1953 to 1954,  
18 Nichols, Norton, and Zaldastani, Z-a-l-d-a-s-t-a-n-i  
19 were my employers. I worked for them as a  
20 structural designer.

21 1954 to 1956, I worked for Metcalf & Eddy  
22 Engineers, as an assistant structural engineer.

23 Then 1956 through 1965, I worked for  
24 Metcalf & Eddy as a project engineer, directly in

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1 charge of investigations, reports, design  
2 engineering, construction services, and operating  
3 advice for public water supply systems throughout  
4 New England, as well as in many other parts of the  
5 U.S.. This work related to dams and reservoirs,  
6 water treatment plants, groundwater supplies,  
7 pumping and transmission facilities, and water  
8 distribution systems.

9 1965 to 1972, I worked for Metcalf & Eddy  
10 Engineers as a project manager, and I was in overall  
11 charge of work performed by project engineers in  
12 public water supply engineering in those same areas  
13 that I was involved in as a project engineer 1956 to  
14 1965.

15 1972 to '73, I was a vice-president and  
16 director of the water division at Metcalf & Eddy.

17 Q. Thank you.

18 Now, sir, when was the first time that you  
19 did any professional consulting work for either the  
20 Town of Southington, or its Board of Water  
21 Commissioners?

22 A. I would say during the late summer of 1975.

23 Q. Can you relate today the circumstances  
24 under which you came to provide consulting services



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1 to the Town of Southington, or its Board of Water  
2 Commissioners, in late summer of 1975?

3 A. We were engaged to perform a preliminary  
4 study of the availability of groundwater supply in  
5 the vicinity of Well No. 6 in Southington.

6 Q. Who engaged you to provide the preliminary  
7 study?

8 A. The Board of Water Commissioners.

9 Q. Do you recall the name of the person on the  
10 Board of Water Commissioners who you first dealt  
11 with at that time?

12 A. The person I first dealt with was John Bean,  
13 who was the superintendent. There was no one  
14 individual on the board with whom I dealt with  
15 before the entire board.

16 Q. Was John Bean the person with whom you  
17 dealt most frequently and directly in connection  
18 with the services you provided to the Board of Water  
19 Commissioners?

20 A. Yes.

21 Q. Who were the people on your professional  
22 staff, other than yourself, at the time in late  
23 summer of 1975?

24 A. Robert S. Larsen, L-a-r-s-e-n, PE; David A.

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1 Jacobsen, PE; and myself.

2 Q. Did Mr. Larsen have any duties or  
3 responsibilities with respect to the work to be  
4 performed for the Board of Water Commissioners?

5 A. Yes, he did.

6 Q. And the same question with respect to Mr.  
7 Jacobsen.

8 A. Yes.

9 Q. Did you yourself personally and directly  
10 participate in the work to be performed?

11 A. I did.

12 Q. Is Mr. Larsen still with your firm?

13 A. He is deceased.

14 Q. When did he die?

15 A. He died August 29, 1976.

16 Q. Is Mr. Jacobsen still with your firm?

17 A. Yes.

18 Q. In your testimony just a short while ago,  
19 you mentioned that the preliminary study was going  
20 to be with respect to groundwater supply in the  
21 vicinity of Well No. 6.

22 A. Yes.

23 Q. Was there a Well No. 6 in existence in the  
24 late summer of 1975?

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1 A. No.

2 Q. Did you make a personal visit to the Town  
3 of Southington at an early stage in the work to be  
4 performed?

5 A. I did.

6 Q. Did you come to learn of the nature and  
7 type of water supply system then in existence in the  
8 late summer of 1975?

9 A. I don't quite understand the question, sir.

10 Q. On your visit, and as part of the work to  
11 be performed for the Board of Water Commissioners,  
12 did you learn what their water system consisted of,  
13 how many wells, where they were in the town, and  
14 that kind of thing?

15 A. Yes.

16 Q. Describe for me how many wells, and where  
17 approximately they were in 1975.

18 A. In 1975, there was Well No. 1, which is  
19 adjacent to the Southington Water Department office.

20 There was Well No. 2, adjacent to Misery  
21 Brook, near Route 6, at the southern end of the town.

22 There was Well No. 3, on Hobart Street,.

23 There was Well No. 4, adjacent to the  
24 Quinnipiac River, and Curtis Street.

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1           There was Well No. 5, which is located  
2           roughly in the south central portion of the town, I  
3           believe adjacent to Route 10. That makes five wells,  
4           I believe.

5           Q.    Do you know when Well No. 5 was installed  
6           by the town?

7           A.    Well No. 5 was installed approximately 1970.  
8           I am not sure of the exact date.

9           Q.    The well that you were engaged to study  
10          preliminarily, where was it in relationship to any  
11          of the other wells that you just testified about?

12          A.    It was not. There was no well there when  
13          we were engaged to perform the preliminary study.

14          Q.    Well, then, let me rephrase that.

15                With respect to the preliminary study, and  
16          I guess we can refer to it as what became Well No. 6,  
17          was it near any of the existing wells, or was it to  
18          be located near any of the existing wells?

19          A.    The site for what -- the site for Well No.  
20          6 was located adjacent to an existing well -- in the  
21          vicinity of an existing well.

22          Q.    What well was Well No. 6 in the vicinity of?

23          A.    No. 4.

24          Q.    When you were first retained, had the area,

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1       namely the vicinity of Well No. 4, already been  
2       selected as the site that they, the Board of Water  
3       Commissioners, wanted you to study?

4       A.     Would you repeat that question, please.

5       Q.     You stated that your initial association  
6       with the Board of Water Commissioners was to do a  
7       preliminary study in an area that we have now  
8       identified as the vicinity of Well No. 4. Had that  
9       area already been identified to you as the area that  
10      the Board of Water Commissioners wanted studied?

11      A.     That general area had. It was a large area.

12      Q.     I take it it was no part of your initial  
13      hire, then, to look broadly at all possible  
14      locations for additional wells, in the late summer  
15      of 1975?

16      A.     What you do mean by "all locations"?

17      Q.     The wells then in existence were spread out  
18      over various parts of the town; is that right?

19      A.     Correct.

20      Q.     Were you asked to look at the sites of  
21      other wells, and perhaps sites in the town where  
22      there were no wells, to determine whether they were  
23      suitable sites for an additional well?

24      A.     We were not requested to look at areas in

1 the vicinity of any of the other existing wells.

2 Q. Do you know when and who made the decision  
3 to look at the area in the vicinity of Well No. 4  
4 for the additional well, in the summer of 1975?

5 A. No, I do not.

6 Q. Was there any form of competitive bidding  
7 or proposals with respect to the preliminary study,  
8 which you were eventually engaged to perform for the  
9 Board of Water Commissioners?

10 A. Competitive bids that would have been  
11 elicited from engineers?

12 Q. Yes.

13 A. Not that I know of.

14 Q. With whom did you discuss or negotiate the  
15 terms of your hire to do the preliminary study?

16 A. Mr. John Bean.

17 Q. Are you familiar at all with the name Sam  
18 Bowers?

19 A. Yes.

20 Q. Did you know Mr. Bowers?

21 A. Yes.

22 Q. Who was Mr. Bowers?

23 A. Would you repeat the question?

24 Q. Who was Mr. Bowers, to your knowledge?

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1           A.     At that time he had served the town in a  
2     capacity of waterworks superintendent, and I believe  
3     he was in the practice of civil engineering. I can  
4     go no further than that.

5           Q.     Did you have to deal at all with Mr. Bowers  
6     in connection with the preliminary study for Well  
7     No. 6?

8           A.     No.

9           Q.     Had you known Mr. Bowers at all prior to  
10    the summer of 1975?

11          A.     Yes.

12          Q.     In what capacity, and how did you know him?

13          A.     I knew him at the time that he was  
14    superintendent of the Water Department.

15          Q.     When was he superintendent of the Water  
16    Department?

17          A.     I can't tell you exactly, but the time I  
18    first met him was back in 1956, at which time he was  
19    superintendent. I have no idea of the term of his  
20    office as superintendent.

21          Q.     As an employee, or later an officer of  
22    Metcalf & Eddy, did you personally ever get involved  
23    in any work for the Town of Southington, or the  
24    Board of Water Commissioners?

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1 A. As an employee of Metcalf & Eddy, I did,  
2 yes.

3 Q. What was the nature of your work with  
4 Metcalf & Eddy for Southington?

5 A. I prepared a comprehensive water study for  
6 the water system, which was signed and submitted by  
7 Mr. Edward B. Cobb, my supervisor.

8 Q. Do you know when the comprehensive water  
9 study was submitted to the Town of Southington?

10 A. Late 1956, I believe.

11 Q. Did the comprehensive water study, prepared  
12 in 1956, identify or attempt to identify sources  
13 within the town for supply wells?

14 A. I have not seen that report for a good many  
15 years. I cannot remember exactly.

16 I do recall, however, that there was some  
17 mention in it relating to other supplies in town,  
18 but I simply cannot remember to what extent.

19 Q. Did you have any occasion, after late 1956,  
20 and before the preliminary study in late summer of  
21 1975, to do any work for the Town of Southington or  
22 its Board of Water Commissioners?

23 A. No.

24 Q. In connection with the preliminary study in



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1 late summer of 1975, and all time subsequent, did  
2 you ever have any occasion to deal with or to talk  
3 with Mr. Bowers in the course of your work?

4 A. Through what date?

5 Q. Through today.

6 A. Yes.

7 Q. Tell me what has been the nature of your  
8 dealings with Mr. Bowers insofar as the work that  
9 you have performed for the Town of Southington since  
10 1975?

11 A. Discussions relating to the construction of  
12 other wells in the Town of Southington -- wells  
13 other than Well No. 6.

14 Q. Wells other than Nos. 1 through 5, as well?

15 A. Yes.

16 Q. Explain for me what the preliminary study,  
17 with respect to the availability of the groundwater  
18 supply in the vicinity of Well No. 6 entailed.

19 A. It entailed first of all a review of  
20 geohydrologic data in the vicinity, and the  
21 preparation of bidding documents for test wells in  
22 the vicinity of Well No. 6; inspection of the test  
23 well work that was performed as part of the study;  
24 and instruction to the well driller as to depth of

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1 well to be driven, location, and type of pumping  
2 test to be conducted. It involved review of water  
3 and soil analyses obtained during the test work;  
4 report on the results obtained from the test work;  
5 and, most importantly, it included advising the  
6 Connecticut Department of Public Health on the  
7 progress of the test work, and the results obtained  
8 from it.

9 Q. Did you make any examination, in the course  
10 of your preliminary study, of any existing records,  
11 such as well logs, or test well borings, that were  
12 already in the possession of the Board of Water  
13 Commissioners?

14 A. Yes.

15 Q. Do you recall what those records consisted  
16 of that you reviewed?

17 A. Those records consisted of boring logs that  
18 were compiled from the boring of test wells in the  
19 general vicinity of Well No. 6, under the direction  
20 of Garrity & Miller, back during the mid-60s.

21 Q. Do you know why Garrity & Miller had placed  
22 test wells in the vicinity of what would become Well  
23 No. 6, in the mid-60s?

24 A. No.

0006686

1 Q. Is it common practice, or did it strike you  
2 as odd at the time that test wells already were in  
3 existence for the vicinity of the area that you were  
4 to do a preliminary study on?

5 A. No.

6 Q. Why is that?

7 A. Why would there be any question?

8 Q. What is the ordinary purpose that test  
9 wells are placed in a given area?

10 A. Generally speaking, the purpose is, first  
11 of all, to conduct a reconnaissance of an area to  
12 determine, in general, the availability of  
13 groundwater in that area.

14 The second phase of a preliminary study is  
15 to drive additional test wells to determine the  
16 amount of water and its quality that is available in  
17 the area.

18 Q. Was it one of the tasks to be performed by  
19 you in connection with the preliminary study to  
20 determine the water quality in the area of Well No.  
21 6?

22 A. Indeed it was.

23 Q. In connection, then, with the preliminary  
24 study that you performed, what steps did you take to

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1 ascertain the water quality in the vicinity?

2 A. We did a number of things.

3 The first thing that we did was to inquire  
4 as to the possibility of pollution generated in the  
5 area to the north of the site proposed for Well No.  
6 6. Then when we got into the actual driving of test  
7 wells, which, incidentally, included both 2 1/2-inch  
8 wells, and an 8-inch test well, we obtained water  
9 samples during the testing of those wells, to  
10 determine water quality.

11 Q. What specifically did you do with respect  
12 to your inquiry as to pollution generated in the  
13 area north of Well No. 6?

14 A. We pointed out, back in mid-August of 1975,  
15 before any test well work was done, that we were  
16 concerned about the possibility of the discharge of  
17 chemical wastes either into the ground, or into the  
18 river.

19 And in response to our inquiry, we received  
20 a note from John Bean, and I will read it to you, if  
21 you would allow that. It is from Mr. Bean,  
22 addressed to me:

23 "Walter, I obtained this report from the  
24 file of the Water Compliance Section of the

0006688

1 Connecticut DEP, State Office Building in Hartford."

2 I do indeed have a copy of his report, if  
3 you would be interested.

4 "It came out of their file on Solvents  
5 Recovery Service of New England, Inc., 114 Lazy Lane,  
6 South Connecticut, 06480. P.S., they report that  
7 nothing is being discharged into the river at the  
8 present time. About a week ago, I saw a live fish  
9 in the river just west of the diner on Queen Street."

10 Q. In answer to my question, Mr. Amory, you  
11 made reference to a blue bound notebook that you  
12 have with you?

13 A. Yes.

14 Q. Am I right?

15 A. Yes.

16 Q. What is the blue bound notebook that you  
17 have brought with you from which you read the note  
18 from Mr. Bean to yourself?

19 A. Amory Engineers' file.

20 Q. Is that more or less your working papers on  
21 the preliminary study that we have been discussing  
22 here this morning?

23 A. Part of them, yes.

24 Q. The note from Mr. Bean to yourself, was

1 that in the form of a typewritten letter or a  
2 handwritten note?

3 A. It is a handwritten letter.

4 Q. Did you physically go to the site  
5 identified by Mr. Bean as that of Solvents Recovery  
6 Service of New England?

7 A. I did.

8 Q. When did you make that visit?

9 A. That was, I would guess, mid-summer 1975.

10 Q. Do you have any notes that you prepared at  
11 the time of your visit in the summer of 1975?

12 A. I don't believe I do.

13 Q. Can you recall what you observed on the  
14 occasion of your visit to SRS of New England in  
15 mid-summer 1975?

16 A. There seemed to be a very poor quality of  
17 water in the drainage ditch flowing from the  
18 Solvents Recovery property easterly to the  
19 Quinnipiac River.

20 Q. Today, do you have any other recollection  
21 of what you saw in mid-summer of 1975, on your visit?

22 A. No.

23 Q. Did you take any samples of the water in  
24 the drainage ditch easterly of Solvents Recovery?

0006690

1 MR. CAREY: Well, excuse me for a minute.  
2 I think you may have misspoken. You referred to the  
3 summer of 1970.

4 (Discussion off the record)

5 (Question read back)

6 A. I answered no, I believe.

7 Q. I have a map that I would like marked for  
8 identification, which is legended, "Water Department,  
9 Town of Southington, Map of Paravella Farm showing  
10 location of test wells." It bears the date June,  
11 1965.

12 (Document marked as Amory Exhibit 1  
13 for identification)

14 Q. Mr. Amory, I am now going to show you a map  
15 that I have had labeled as Amory Deposition Exhibit  
16 1. I wonder, if by reference to the map, you can  
17 verify for us that it appears to be the area that  
18 was encompassed within your preliminary study?

19 A. I would say that the area that we studied  
20 is encompassed within the area that is shown on this  
21 map.

22 Q. Can you, by reference to the map, sir, and  
23 perhaps with a pencil, indicate on it the area that  
24 you visited in mid-summer of 1975, in which you

1 observed the drainage ditch easterly of Solvents  
2 Recovery Service?

3 A. Pretty difficult to tell here where the  
4 property lines are. Would you help me identify the  
5 line between the northerly boundary of land that now  
6 belongs to the Town of Southington?

7 Q. I wish I had a better map. I don't,  
8 unfortunately.

9 A. I simply cannot identify what you are  
10 looking for on this map. It is not sufficiently  
11 well defined. I am sorry.

12 Q. Did you, at the time in the mid-summer of  
13 1975, visit a site known as Southington Excavators?

14 A. Southington Excavators?

15 Q. Yes.

16 A. Mid 1975 -- mid-summer of 1975?

17 Q. Right.

18 A. Not that I recall.

19 Q. You said that your reason for visiting the  
20 Solvents Recovery site was concern for any pollution  
21 generated in the area north of Well No. 6?

22 A. The reason for inspecting the brook -- the  
23 ditch which discharges water from the Solvents  
24 Recovery property, was simply because, in making a



0006692

1 survey of the suitability of the area for a well  
2 site, it is customary to inspect areas within a  
3 reasonable distance of that well site to determine  
4 whether or not there are obvious sources of  
5 pollution.

6 Q. In your review of the area, did you observe  
7 any obvious sources of pollution?

8 A. The ditch, which I mentioned earlier, had  
9 some pretty bad looking water in it.

10 Q. Other than the ditch, did you observe any  
11 other obvious sources of pollution?

12 A. I didn't go inside the fence, no. So that --

13 MR. CAREY: I am going to object to the  
14 form of the question. We don't know yet where he  
15 looked. We don't know to what extent he was  
16 qualified to make those observations. I think that  
17 is correctable at this time.

18 BY MR. RODBERG:

19 Q. You will see on the Amory Deposition  
20 Exhibit 1, there is a reference to Southington  
21 Excavators along the Quinnipiac, east of it.

22 Q. Where is that, sir?

23 A. Right here.

24 Q. Does my pointing that out to you enable you

1 to recall whether you examined as far north as  
2 Southington Excavators? It is beyond the  
3 Connecticut Power and Light easement, if that helps.

4 A. I don't recall having been over there.

5 Q. Did anyone in Southington, Mr. Bean, for  
6 example, indicate to you any concerns that they had  
7 with respect to Southington Excavators?

8 A. No.

9 Q. Did you make any examination for obvious  
10 sources of pollution to the south of the Quinnipiac  
11 River, near what is now Well No. 4, or what was then  
12 Well No. 4?

13 MR. CAREY: I object to the form again on  
14 the second ground stated earlier, because I don't  
15 know what is meant by "obvious sources of pollution,"  
16 and I am not sure what the witness means by that.

17 MR. RODBERG: You may answer the question.

18 THE WITNESS: Could I have the question  
19 again, sir.

20 (Question read back)

21 A. I did not. And the reason I did not, if I  
22 may explain why, is basically because it was my  
23 understanding that the Department of Environmental  
24 Protection, as well as the State Department of

0006694

1 Public Health, had and still has the responsibility  
2 for approving a well site based on a sanitary survey.  
3 So that, for that reason, we did not indeed check  
4 for the possibility of sources of pollution up and  
5 down the river.

6 Q. You used the term "sanitary survey." Could  
7 you please explain what you mean by that?

8 A. Sanitary survey is simply a survey to  
9 determine the possibility of sources of pollution  
10 which could have an adverse sanitary affect on the  
11 quality of water.

12 Q. And your visit north of the site of Well  
13 No. 6, that you have described to us, would be part  
14 of what you call a sanitary survey?

15 A. No, I wouldn't consider it part of a  
16 sanitary survey. We were not involved in a sanitary  
17 survey per se. It was an observation which I made  
18 when I was down there with Mr. Bean looking at the  
19 well site.

20 Q. In the normal course of approving a well  
21 site as a public drinking water supply well, who  
22 performs the sanitary survey?

23 A. Customarily the State Department of Public  
24 Health.

1 Q. When you were first engaged in mid-summer  
2 1975, to perform the preliminary study, do you know  
3 whether a sanitary survey had been performed with  
4 respect to the location of Well No. 6?

5 A. No, I don't.

6 Q. Do you know whether one was subsequently  
7 performed, a sanitary survey?

8 A. No, I do not. Could I am amplify that out,  
9 sir?

10 Q. Sure.

11 A. I assume that since the State Department of  
12 Health has approved the construction of Well No. 6,  
13 and a pumping station, that the Department must have  
14 conducted a sanitary survey of the tributary to Well  
15 No. 6. This is a customary procedure.

16 Q. In your observations of the drainage ditch  
17 and the poor quality of water that you observed in  
18 the ditch, did you reach any conclusion as to the  
19 suitability of the proposed location for a Well No.  
20 6?

21 A. Yes.

22 Q. What was your conclusion?

23 A. That it was a suitable location, after a  
24 great deal of test work in the area, to determine

1 the quality of groundwater in the vicinity of Well  
2 No. 6.

3 MR. RODBERG: I am going to ask that the  
4 document on the stationery of Walter Amory,  
5 Consultant Engineers, dated June 24, 1975, from Mr.  
6 Amory to John Bean, be marked for identification as  
7 Walter Amory Deposition Exhibit 2.

8 (Document marked as Amory Exhibit 2  
9 for identification)

10 Q. Mr. Amory, I am going to show you the June  
11 24, 1975 letter that I have had marked as Amory  
12 Deposition Exhibit 2.

13 I will state to you, Mr. Amory, that that  
14 document is the -- or appears to be the earliest  
15 dated document that we have of correspondence  
16 between you and the town. Do you know whether there  
17 was any earlier correspondence?

18 MR. CAREY: For the record, are there  
19 additional copies of that document?

20 MR. RODBERG: Well, I don't have them with  
21 me. We'll of course make copies for everyone. I am  
22 sorry for the inconvenience that may cause today.  
23 But we pulled these things together somewhat late.

24 MR. CAREY: Fine.

1 (Witness reviews document)

2 A. I believe this is the earliest  
3 correspondence.

4 MR. RODBERG: If anybody cares to, I don't  
5 mind if they look over my shoulder. But there are  
6 some questions I want to ask the witness about this  
7 document.

8 Q. Mr. Amory, I note you are looking through a  
9 file. Do you have a copy of that document, the June  
10 24, 1975 letter?

11 A. I do.

12 Q. That would facilitate my questioning about  
13 the document to you. If you could just refer to it,  
14 please.

15 I would like to address your attention, sir,  
16 to the second paragraph of the second page. Well,  
17 first a preliminary question. I apologize.

18 That is your signature at the end of the  
19 document?

20 A. Yes.

21 Q. And you did write the letter?

22 A. I did.

23 Q. I will read the paragraph into the record  
24 to make my questioning somewhat clearer.

0006698

1            "We believe that before the proposed well  
2        is constructed, an 8-inch test well, together with  
3        additional 2 1/2-inch wells, should be driven and  
4        test pumped to determine the best location for the  
5        proposed well. Although data currently available  
6        indicates the location of Observation Well No. 3 to  
7        have a suitable aquifer for development of a new  
8        well. This location is only 600 feet from Well No.  
9        4, and we expect that a production well at this  
10       location would adversely affect the yield of Well  
11       No. 4."

12            Is it fair to say that a purpose that you  
13        had in mind in additional test wells, was to see  
14        whether there was a suitable location further north  
15        and further away from Well No. 4?

16            A.     Yes.

17            Q.     What caused you to reach the conclusion, as  
18        you apparently do, that locating Well No. 6 only 600  
19        feet from Well No. 4, would adversely affect the  
20        yield of Well No. 4?

21            THE WITNESS:    Would you repeat that  
22        question, please.

23            MR. RODBERG:    Would you read it back,  
24        please.

0006699

1 (Question read back)

2 A. Simply because if two wells are very close  
3 to each other, when you pump water out of one of  
4 them, you are robbing some of the water that would  
5 normally flow into the other one. You are robbing  
6 Peter to pay Paul.

7 Q. Sir, did you perform any calculations at  
8 the time of your June 24, 1975 letter, to verify or  
9 to ascertain what the effect on Well No. 4 of a new  
10 well at the proposed location would be?

11 A. No, we did not. That's why I used the word  
12 "expect."

13 Q. Did Mr. Bean, or the Board of Water  
14 Commissioners, agree to follow your recommendation  
15 to sink additional test wells?

16 A. Yes, they did.

17 Q. Do you know where and how many additional  
18 test wells were placed there then as part of your  
19 study?

20 A. Yes.

21 Q. Could you tell me, please?

22 A. Well, they are all shown in the test well  
23 report, dated November 24, 1975, addressed to the  
24 Board of Water Commissioners in Southington.



0006700

1 Q. As long as you have identified that  
2 document, I would like it marked for identification.

3 MR. RODBERG: I am going to mark a letter  
4 with attachments that bears the date November 24,  
5 1975, signed by Walter Amory, on the stationery of  
6 Walter Amory Consultant Engineers.

7 (Document marked as Amory Deposition  
8 Exhibit 3 for identification)

9 Q. Mr. Amory, the document that I have now  
10 marked as Amory Deposition Exhibit 3, is that your  
11 report to the board that you just made reference to  
12 in response to a previous question of mine?

13 A. Yes.

14 Q. Referring to Amory Deposition Exhibit 3,  
15 there is a Figure 2 indicating a map, with the  
16 numbering TW1, TW2, TW2a, et cetera. Could you tell  
17 us what the designations "TW," with the numeral  
18 suffix, indicate?

19 A. "TW" designates test well. And the number  
20 designates order of sequence in which the well was  
21 driven.

22 Q. Specifically with reference to Figure 2 of  
23 Amory Deposition Exhibit 3, are those test wells  
24 which were placed in the location indicated as part

0006701

1 of your study?

2 A. I believe all except for test well 3-65,  
3 they were, yes. And the USGS observation well,  
4 which is located within the Apollo line right-of-way.

5 Q. In placing the test wells at the locations  
6 indicated, did you also sample the water quality  
7 from those wells?

8 A. We did.

9 Q. Did you have that water analyzed for any  
10 chemical constituents?

11 A. Yes.

12 Q. Who selected the chemical constituents  
13 which were analyzed for?

14 A. Amory Engineers.

15 Q. When you say "Amory Engineers," you are  
16 referring to yourself?

17 A. Yes.

18 Q. Or to anyone else on your staff?

19 A. Yes, I am referring to Amory Engineers.

20 Q. Do you know what individual within Amory  
21 Engineers made the decision?

22 A. I cannot remember. Certainly I would say  
23 either of the -- any one of the three registered  
24 professional engineers who were on the staff at that

0006702

1 time.

2 Q. There is a test well shown on Figure 2 of  
3 Amory Exhibit 3, then another which is TW2a. Do you  
4 recall the circumstances under which TW2a came to be  
5 placed where it is?

6 A. I believe I do, yes.

7 Q. Can you relate to me, now, those  
8 circumstances.

9 A. The reason for driving Test Well 2a was to  
10 find out if we could identify the location of a  
11 better quality of water we found at the site of Test  
12 Well 2.

13 Q. What had you found with respect to the  
14 water quality at the site of Test Well 2?

15 A. That it had high iron and manganese.

16 Q. Without even necessarily marking it, I am  
17 going to show you a Newlands Sanitary Laboratory  
18 report. I ask you if it might refresh your  
19 recollection that a distinct sulfide odor was also  
20 detected at Test Well 2?

21 A. Yes, that is true.

22 Q. Did the presence of high iron and manganese,  
23 and a sulfide odor, lead you to any conclusion with  
24 respect to the water quality in the vicinity of Test

0006703

1 Well 2?

2 A. Yes, it did.

3 Q. What was that conclusion?

4 A. That at that site, it would not have been  
5 advisable to locate a production well some 900 feet  
6 to the northeast from the location of the 8-inch  
7 test well.

8 Q. And with respect to the water quality for  
9 Test Well 2a, what did you determine?

10 A. I just told you what I had determined.

11 Q. I am sorry. My previous question related  
12 to Test Well 2.

13 A. I am sorry.

14 Q. You then --

15 A. We drew the same conclusion from the  
16 results of Test Well 2a, that we had drawn earlier  
17 from Test Well 2, in spite of the fact that the USGS  
18 well, which is in the vicinity of Test Well 2 and  
19 Test Well 2a, indeed showed a good quality of water.

20 Q. What about the water quality from Test Well  
21 1, how was that?

22 A. Test Well 1?

23 Q. Yes.

24 A. Do you happen to have the report on that?

0006704

1 Q. I don't seem to have it in these papers.  
2 That does not mean that I was not furnished with it.  
3 That just means that I don't have it here.

4 A. I don't believe I have it either. The  
5 reason that I don't have it is because we found the  
6 material, the soil, to be very tight in that area,  
7 so that obviously regardless of water quality, we  
8 could not pump water out of the ground. So that not  
9 being able to pump water out of the ground, I  
10 believe we took no samples.

11 Q. Your report of November 24, 1975, Amory  
12 Deposition Exhibit 3, recommended that Well No. 6 be  
13 located at the site of the 8-inch test well?

14 A. Yes.

15 Q. That location was within 600 feet of Well  
16 No. 4, was it not?

17 A. It was approximately 600 feet of Well No. 4,  
18 yes. I am not sure of the exact distance. I am not  
19 sure whether it was within 600 feet or not. But it  
20 was approximately that.

21 Q. Had your conclusion changed as of November  
22 24th, 1975, with respect to the possibility of  
23 pumping of Well No. 6 affecting the yield of Well  
24 No. 4?

0006705

1 A. Not my conclusions; my thoughts.

2 Q. I am sorry. Your what?

3 A. My thoughts.

4 Q. Tell me --

5 A. I had never concluded that there should not  
6 be a production well driven at the site of No. 6, as  
7 it is now. I indicated, by the June, 1975 letter,  
8 that I suspected that there would be an adverse  
9 effect of locating the well 600 feet away from No. 4.

10 Q. In connection with your report of November  
11 24, 1975, had you done anything to confirm or refute  
12 your suspicions of June of '75?

13 A. Yes.

14 Q. What had you done and what were the results?

15 A. The results of the test work reported in  
16 our November 24, 1975 document, indicated that the  
17 best site in the area that we tested for a  
18 production well subsequently to become Well No. 6,  
19 was at the site of the 8-inch test well.

20 Q. Did you determine whether locating a  
21 production well, as you recommended it in your  
22 November 24, 1975 report, would have any effect on  
23 production yield from Well No. 4?

24 A. We did indeed.

1 Q. Did you calculate what the effect on the  
2 yield from Well No. 4 would be?

3 A. Scratch that. I think I may have misquoted  
4 our conclusions when I answered that we did estimate  
5 the impact. May I just refer to our report?

6 Q. Sure.

7 (Witness reviews documents)

8 A. Yes, we did conclude, and so report, in  
9 this November 24, 1975 document, that a well located  
10 at the 8-inch test well, would have an impact on the  
11 production of Well No. 4.

12 Q. There is a term which I have heard called  
13 "cone of influence." Do you have an understanding  
14 of that term?

15 A. Yes.

16 Q. Would you explain to me what the term means  
17 to you, as a professional.

18 A. Cone of influence is the area within which  
19 water pumped from a well will lower the natural  
20 water table.

21 Q. Did you, in connection with the November  
22 24th, 1975 report, measure or determine the extent  
23 of the cone of influence of putting in Well No. 6 at  
24 the location recommended?

0006707

1           A.     Insofar as its impact on Well No. 4, yes,  
2     we did.

3           Q.     Did you make any determination as to  
4     whether the cone of influence from Well No. 6 would  
5     extend up as far as the poor water quality  
6     encountered at Test Wells 2 and 2a?

7           A.     Not at this particular time. We did  
8     subsequently.

9           Q.     Would the combined pumping of Well No. 4  
10    and Well No. 6, as you anticipated it to occur in  
11    your November 24, 1975 report, have an effect on the  
12    cones of influence? I guess what I am really asking  
13    you is if a cone of influence in one well is made  
14    larger if two wells are pumping in the same general  
15    area simultaneously?

16          A.     In certain areas it is, yes, mainly in the  
17    areas between the wells.

18                 I might add, with your permission, sir...

19          Q.     Sure.

20          A.     This was a three-day test, a relatively  
21    short-term test. And I think that any measurement  
22    on cone of influence, based on the results of a  
23    three-day test, would not have any significance.  
24    This was not a sufficiently long test upon which to



0006708

1 draw any conclusions relating to cone of influence.

2 Q. In making the recommendation, as you do in  
3 your November 24, 1975 report, had you done anything  
4 other than what you have already testified to, with  
5 respect to the suitability of the location as far as  
6 water quality is concerned, particularly with  
7 reference to your earlier testimony about observing  
8 the drainage ditch east of Solvents Recovery Service?

9 THE WITNESS: Would you read that question  
10 back, please.

11 (Question read back)

12 Q. It is a convoluted question. Do you want  
13 me to break that down a little?

14 A. No, I think it is all right.

15 The question, as I understand it, is did we  
16 do any additional investigation relating to water  
17 quality other than what I have testified to?

18 Q. Fair enough.

19 A. I have testified to the fact that I was  
20 concerned about the quality of water in the ditch  
21 draining Solvents Recovery Service property, and  
22 that I subsequently inquired of John Bean if he  
23 would track that down with the DEP, who at that time  
24 was the state agency primarily responsible for the

0006709

1     policing of surface water quality.

2             We also corresponded with the State  
3     Department of Health, and I would refer you to the  
4     November 24, 1975 document. Table 3 includes the  
5     results of well water analyses performed by Newlands  
6     Sanitary Laboratory on samples that were taken  
7     during the pump test performed on Test Well No. 8,  
8     which, in my judgment, there is no question about  
9     the suitability of the quality of water that was  
10    pumped from that well.

11            I would also refer you to a letter dated  
12    November 28, 1975, under the letterhead of the  
13    Connecticut Department of Health, which was in  
14    response to our contact with the Health Department  
15    prior to and during the testing of this 8-inch test  
16    well, done under the preliminary study.

17            I would also refer you to Amory Engineers'  
18    letter to the Department of Health, on the same  
19    subject, dated December 9, 1975. And I believe it  
20    is a fair statement that this correspondence was  
21    indeed in response to communications that we had  
22    during the progress of the preliminary study, with  
23    the State Department of Health, on water quality.

24            Q.     Well, let me take them one at a time, so

1 the record is clear to the documents to which you  
2 refer.

3 My copy, or actually the copy marked for  
4 identification, Table 3 consists of three pages,  
5 each of which is a report on examination of water on  
6 the letter stationery of Newlands Sanitary  
7 Laboratory?

8 A. Correct.

9 Q. You then referred to a November 28th, 1975  
10 letter from the Department of Health.

11 MR. RODBERG: I will have two letters  
12 marked, in fact. November 10th, 1975, from John  
13 Bean to Richard Woodhull. I would like that marked,  
14 please. The first one will be Amory Deposition  
15 Exhibit 4. Then the November 28, 1975 letter would  
16 be Walter Amory Exhibit 5.

17 (Documents marked as Amory Deposition  
18 Exhibits 4 and 5 for identification)

19 Q. Mr. Amory, the first letter I am going to  
20 show you, is that which I have marked Amory  
21 Deposition Exhibit 4, which is from Mr. Bean to Mr.  
22 Woodhull, November 10, 1975. It does not reflect a  
23 copy to you. I just wonder if you have ever seen it,  
24 or if you are familiar with it?

0006711

1 A. I have not seen that before.

2 Q. And you made reference in your testimony to  
3 a November 28, 1975 letter?

4 A. Yes.

5 Q. I am showing you one from the Department of  
6 Health to Mr. Bean, which I have marked as Amory  
7 Deposition Exhibit 5, the first sentence of which  
8 reads, "I am responding to your letter of November  
9 10, 1975, requesting a copy of a typical sanitary  
10 easement."

11 I guess I have two questions. First, is  
12 the letter I am now showing you, Amory Deposition  
13 Exhibit 5, the same letter to which you referred to  
14 in your earlier testimony?

15 A. Yes.

16 Q. I am not sure, from the context of the  
17 letter, what is being discussed there. Can you  
18 relate to me, by refreshing your recollection by  
19 reading the letters, or by any other means, what was  
20 the purpose and nature of the correspondence between  
21 Mr. Bean and the Department of Health, Mr. Jarema?

22 A. I believe the first paragraph of the  
23 November 28th, 1975 letter, responds to Mr. Bean's  
24 November 10 letter, in which he essentially inquires

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1 of the Department of Health as to whether or not it  
2 would be permissible to acquire a sanitary easement  
3 instead of land in fee, to meet the land control  
4 requirements to safeguard the sanitary quality of  
5 Well No. 6.

6 The second paragraph of the November 28  
7 letter, addresses the water quality obtained -- or  
8 the quality of the water obtained during the pump  
9 testing of the 8-inch well.

10 Q. Did you have any involvement in the subject  
11 matter of the first paragraph with respect to the  
12 sanitary easement?

13 A. Yes, I did.

14 Q. What was your involvement with respect to  
15 that?

16 A. I was advised, through error, actually,  
17 that the town did not have 200 feet of clearance  
18 between the site that had been selected for the  
19 production well, and adjacent property. And it so  
20 turned out that this was more of a tempest in the  
21 teapot, because in fact the town did have the 200  
22 feet. On further investigation, this was what was  
23 discovered.

24 Q. So ultimately no sanitary easement was

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1 required for that site?

2 A. To my knowledge.

3 Q. Now, the second paragraph refers to  
4 laboratory results on I assume the test well -- the  
5 8-inch test well?

6 A. I believe so, yes.

7 Q. Is it fair to say that the initial sampling  
8 indicated a high fecal coliform count from the test  
9 well?

10 A. It is fair to say that there is no  
11 indication of fecal coliform count, in the letter.

12 Q. Were you involved, insofar as the testing  
13 of the water quality from the test well, for fecal  
14 coliform?

15 A. Yes; Amory Engineers was involved.

16 Q. Amory Engineers was involved. Did the test  
17 results at any time indicate an unsatisfactory level  
18 of fecal coliform from that well?

19 A. No, they did not.

20 Q. Do you know what the reference in the  
21 sentence that reads, "Generally the water quality  
22 appears satisfactory, that is, all results except  
23 the bacteriological results." That is Jarema's  
24 statement to Mr. Been. I wonder if you have an

0006714

1 understanding of what that reference is?

2 A. Well, read the next sentence.

3 Q. "The coliform count was 220 confirmed  
4 coliform colonies per 100 ml. It's obvious that the  
5 well should be rechlorinated and resampled to  
6 ascertain whether the coliform count was due to  
7 construction contamination, or another source."

8 A. I would submit, sir, there is a big  
9 difference between fecal coliform and coliform.

10 Q. Fair enough. Now that you have corrected  
11 me, my question is, what were the results in the  
12 sampling from the test well that led to the  
13 statements in the November 28, 1975 letter, and how  
14 was it ultimately resolved?

15 A. I would -- I would assume that the State  
16 Department of Health took a sample for bacterial  
17 quality, and had it analyzed, and came up with a  
18 coliform count of 220 colonies. Coincidentally, a  
19 companion sample was taken, and was submitted to  
20 Newlands Sanitary Laboratory, and the results of  
21 analysis of that sample are reported in Table 3, on  
22 the last sheet, as zero. And our letter, Amory  
23 Engineers' letter, dated December 9, 1975, addressed  
24 to Mr. Jarema, signed by David A. Jacobsen, I

0006715

1 believe addresses that matter.

2 MR. RODBERG: Let me have the December 9,  
3 1975 letter marked then as the next exhibit.

4 (Document marked as Amory Deposition  
5 Exhibit 6 for identification)

6 Q. Mr. Amory, is the document marked Amory  
7 Exhibit 6, the December 9, 1975 letter to which you  
8 just referred in your testimony?

9 A. Yes.

10 Q. Is it fair to say, in summary, then, that  
11 you, Amory Consulting Engineers, were satisfied that  
12 whatever the prior results, by December 9, 1975,  
13 there was no coliform problem with respect to the  
14 water quality from the test well?

15 A. Yes.

16 Q. And that you made the decision that it  
17 would not be resampled until after it had been  
18 installed?

19 A. The State Department of Health and we made  
20 the decision jointly, as indicated by the last  
21 sentence of the December 9, 1975 letter.

22 Q. In connection with the discussions and  
23 sampling for coliform, do you recall whether you had  
24 any discussions with anyone from the Department of



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1 Health with respect to coliform or its absence in  
2 the Quinnipiac River?

3 A. I don't recall any such conversation.

4 Q. Does your November 24, 1975 report reflect  
5 the conclusion of the preliminary study?

6 A. It does.

7 Q. Were you engaged thereafter, or did you  
8 continue to perform services for the Town of  
9 Southington Board of Water Commissioners?

10 A. Yes.

11 Q. What were the nature of the services that  
12 you provided next?

13 A. We were next engaged by the Board of Water  
14 Commissioners to provide engineering services in  
15 connection with the construction of a production  
16 well at the site of the 8-inch test well.

17 Q. What services did you in fact perform? And  
18 can you give me the approximate time when it was  
19 performed?

20 A. Yes. The services included specifically  
21 the preparation of bidding documents for the  
22 construction of a production well. This work was  
23 initiated, I believe, in January of 1976. It  
24 subsequently included inspection of well

0006717

1 construction, instruction to the well driller while  
2 the work was in progress, review of water, soil  
3 analyses, and a report on the construction and  
4 testing of Well No. 6. And again, one of the  
5 essential segments of this work was coordination  
6 with the Department of Public Health on the progress  
7 of the work, and the results obtained. I would say  
8 that we wrapped up the construction of Well No. 6  
9 with the report which we submitted to the town,  
10 dated November 12, 1976.

11 MR. RODBERG: I am going to have then,  
12 marked as the next exhibit, "Report to Board of  
13 Water Commissioners, Southington, Connecticut,  
14 Construction of Well No. 6," dated November 12,  
15 1976.

16 (Document marked as Amory Deposition  
17 Exhibit 7 for identification)

18 Q. Mr. Amory, would you review what I have  
19 marked as Amory Deposition 7. I ask you whether  
20 that is in fact a copy of the report that you  
21 submitted on or about the date indicated?

22 A. Well, without going through it page by page,  
23 it appears to be a reasonable facsimile thereof.

24 Q. Thank you. Can you either by reference to

0006718

1 the report or to your notes, or whatever, recall  
2 when the construction of Well No. 6 was completed as  
3 far as the installation of the shaft?

4 A. Installation of what?

5 Q. The well shaft, the casing.

6 I think I can help you with a page  
7 reference. If you would look at Page 2, the third  
8 paragraph under "Construction of Well No. 6," it  
9 says, "Construction and testing of the well was  
10 completed on July 16th."

11 A. Yes. This was the first phase of test work.  
12 Subsequently, there was some additional test work  
13 performed on the well.

14 Q. Was there any additional water quality  
15 testing done with respect to the water quality in  
16 Well No. 6, at or about the time of its completion,  
17 that is around July, 1976?

18 A. Would you repeat that question, please?

19 Q. I will rephrase it. Did anyone test the  
20 water quality out of Well No. 6, when it was  
21 completed?

22 A. Yes.

23 Q. Who did, and what were its results?

24 MR. RODBERG: And Mr. Amory, I am going to

0006719

1 have a document marked which may help you. This is  
2 not a test of your memory.

3 I have a letter on Walter Amory stationery,  
4 signed by David A. Jacobsen. It appears to be dated  
5 August 11, 1976, to Robert Taylor, Director,  
6 Division of Water Compliance and Hazardous Materials

7 (Document marked as Amory Deposition  
8 Exhibit 8 for identification)

9 A. I am about to answer your question, if you  
10 would just let me.

11 Q. Sure.

12 A. Does the question still stand?

13 Q. Yes. I was going to show you the document  
14 to see if it could help you answer the question. If  
15 you don't need it...

16 A. Thank you. I think I can answer it.

17 The test work on water samples taken from  
18 Well No. 6 was performed by the Newlands Laboratory,  
19 and by the State Department of Health. The results  
20 of the test work, again this was back in 1976,  
21 indicated that after we had completed ten days of  
22 pumping -- this included two five-day phases -- that  
23 the quality of the water was suitable as a source of  
24 drinking water supply.

0006720

1 Q. Do you know when in 1976 the ten days of  
2 pumping occurred?

3 A. Yes. I think I can answer you on that.

4 The first five and a half day pump test ran  
5 from July 6 through 11, 1976. We subsequently ran a  
6 five-day test from September 15 to September 20,  
7 1976.

8 Q. Did anything occur subsequent to July 20,  
9 1976, to change the conclusion that the water  
10 quality was suitable as a source of drinking water  
11 supply?

12 A. Are you inferring, sir, that that was the  
13 statement that I made in my testimony?

14 Q. Yes, I am assuming that.

15 A. That was not the statement I made in my  
16 testimony.

17 Q. You described two five-day pump tests.

18 A. Yes.

19 Q. Water quality was measured in those  
20 intervals.

21 A. I believe my testimony was that at the  
22 completion of all test work, that the water was  
23 determined to be suitable for public water supply.

24 Q. What was the period of time encompassed by

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1 "all of the test work"?

2 A. I have just given it to you, sir.

3 Q. That would have been July 6 through July  
4 20th, 1976?

5 A. No, sir. That would have been July 6  
6 through July 11, five and a half days; and then  
7 September 15 through September 20, five days.

8 Q. And all of the results of analyses  
9 performed on water samples, in the interval between  
10 July 6 through September 20, 1976, indicated water  
11 was suitable as a source of drinking water supply?

12 A. It did indeed.

13 Q. My next question is did anything come to  
14 your attention at that time or subsequently, which  
15 in any way indicated the water quality from Well No.  
16 6 was not suitable as a source of drinking water  
17 supply?

18 A. What do you mean "at that time"?

19 Q. In the time period July 6, 1976, through  
20 September 20, 1976, or subsequent.

21 A. Yes. There was evidence to show that we  
22 had some heavy metals in the water, and this was  
23 indeed the reason for conducting a second five-day  
24 test.

0006722

1           On the completion of the five-day test, the  
2 levels of heavy metals were determined to be below  
3 the limits recommended for safe drinking water.

4           Q.   Who conducted the test for heavy metals  
5 that led to the second five-day test?

6           A.   I believe the State Health Department.

7           Q.   Were any heavy metals included as part of  
8 the analysis that Amory Consultant Engineers  
9 commissioned in the first round of tests in July of  
10 1976?

11          A.   No, there were not.

12               MR. RODBERG: We have marked as Amory  
13 Deposition Exhibit 8, a letter of David A. Jacobsen  
14 to Robert Taylor, dated August 11, 1976.

15               (Discussion off the record)

16               MR. RODBERG: Off the record Mr. Amory  
17 indicated he wanted to add something to his previous  
18 testimony. Go ahead.

19          A.   I believe you asked me, sir, if analysis  
20 for heavy metals had been included as part of the  
21 analysis which we made on samples collected during  
22 the five-day test. I responded, that no, we had not  
23 included that. And basically, the reason that we  
24 had not included heavy metals in our analysis was

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1 because, to the best of your knowledge, there was no  
2 indication of these heavy metals, namely lead and  
3 mercury, in the water that had been pumped from Well  
4 No. 4 directly across the river, since approximately  
5 the mid-'60s.

6 Q. Is your last statement based on a review of  
7 any analysis for lead and mercury from Well No. 4,  
8 in the 1960s?

9 A. I cannot recall at the time whether I  
10 actually sat down and looked over these analyses. I  
11 don't remember having seen any such evidence. That  
12 is going back quite a while. I honestly cannot  
13 remember.

14 Q. During the first round of sampling and  
15 analysis, in July of 1976, were samples also  
16 obtained and analyzed with respect to Well No. 4?

17 A. This was during the first five-day test?

18 Q. Yes, sir.

19 A. Not as part of the Amory Engineers test  
20 work.

21 Q. Let me show you Amory Deposition Exhibit 8.  
22 Are you familiar with the letter?

23 A. I believe I am. I would just like to see --  
24 off the record.



0006724

1 (Discussion off the record)

2 MR. RODBERG: Sure.

3 A. Yes, I have that here. I am familiar with  
4 it. I am very familiar with it.

5 Q. One of the decisions that was made, with  
6 respect to the second round of five days of pumping  
7 for September, 1976, was to now test Well No. 6 for  
8 heavy metals, particularly lead and mercury; is that  
9 right?

10 A. That is correct.

11 Q. Was a decision made also at that time to  
12 test Well No. 4 and some other wells in the area as  
13 well?

14 A. I believe so, yes.

15 Q. In your report, which we have marked as  
16 Amory Deposition Exhibit 7, you included the results  
17 of that second round of testing, which is part of  
18 Table B2; is that right?

19 A. Correct.

20 Q. And your report discusses the water quality  
21 in Wells 4 and 6, the results of the test in the  
22 section beginning on Page 7; is that right?

23 A. Yes. Well, the results displayed in Table  
24 B2, to which you have just referred, sir, in which I

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1 might add because of the reduced pumping rate at  
2 which we tested the well during the second phase of  
3 the testing, the heavy metals, namely mercury and  
4 lead, all measured less than the MCL.

5 Q. What do you mean, sir, by "MCL"?

6 A. Maximum contaminant level, as prescribed by  
7 EPA drinking water standards.

8 Q. That was true of Well No. 6?

9 A. That was true of Well No. 6 and Well No. 4.

10 Q. You did, however, make a recommendation,  
11 which appears at the foot of Page 3, with respect to  
12 the use of Wells 4 and 6 as a result of the analysis  
13 for mercury and lead?

14 A. That is correct.

15 Q. During this period preceding --

16 A. Excuse me just a minute. Should I amplify  
17 what that recommendation was?

18 Q. -- well --

19 A. -- for the record.

20 Q. Did you make a recommendation orally that  
21 was not contained in your written recommendation  
22 that appears on Page 8?

23 A. No.

24 Q. Do you think in any way the recommendation

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1 that appears in your written report is at all  
2 misleading or misstated, or requires amplification  
3 of some kind?

4 A. Of course not; as long as it is recognized  
5 as being there.

6 Q. Did you, in the first round of sampling, in  
7 July of 1976, commission any analysis for  
8 organohalides?

9 A. We did not.

10 Q. Did information concerning organohalides in  
11 Wells 4 and 6 come to your attention prior to your  
12 report of November 12th, 1976?

13 A. No, sir.

14 Q. What was behind the statement on Page 9,  
15 the first paragraph, then? By "behind it," I mean  
16 what led up to your putting the sentence, and I will  
17 read it for the record so your answer is more clear,  
18 "The Department of Health has recommended that both  
19 wells be monitored monthly for metals and  
20 organohalides (a group of hydrocarbon compounds) for  
21 which no limits as of yet have been established.  
22 Adherence to this recommendation would appear most  
23 prudent."

24 A. I think in response to your question, that

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1 we should refer to the State of Connecticut,  
2 Department of Health letter, dated October 25, 1976,  
3 addressed to David A. Jacobsen, Walter Amory  
4 Consulting Engineers, in which the Department makes  
5 the recommendation that the Water Department use No.  
6 4 well sparingly, and blend the water from it with  
7 Well No. 6, and that water from both Wells 4 and 6  
8 be monitored at monthly intervals for both metals  
9 and organohalides during periods that the wells are  
10 in use, so that contamination level can be  
11 established. And we indeed, at the top of Page 9 of  
12 our November 12, 1976 report, did recommend that  
13 this recommendation be adhered to.

14 Q. The Appendix C, supplemental data that is  
15 attached to Amory Deposition Exhibit 7, contains  
16 more than just the letter of October 25th, 1976,  
17 dealing with the same subject matter of  
18 organohalides, does it not?

19 (Discussion off the record)

20 A. Excuse me. What was your question again,  
21 sir?

22 Q. I will rephrase it.

23 In your previous answer, you made reference  
24 to an October 25th, 1976 letter. I am merely

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1 pointing out that Appendix C to your report contains  
2 other letters between the State of Connecticut and  
3 Southington Water Department, which appear to deal  
4 with the same subject matter, namely organohalides  
5 in Wells 4 and 6?

6 A. Yes.

7 Q. Your answer was not restricted to just the  
8 reference to the October 25th letter, but your  
9 recommendation in your report was based on all of  
10 the information that you had accumulated from the  
11 state and other sources, as shown in Appendix C?

12 A. Yes. I would say specifically the two  
13 letters, October 25 and October 15, 1976.

14 Q. One of the recommendations which the state  
15 appears to be making is to use Well No. 4 sparingly,  
16 and blend with Well No. 6. Do you have an  
17 understanding of what that was going to accomplish?

18 A. Well, I cannot answer that question  
19 directly. I would have to surmise that the intent  
20 for blending would be that the concentration of  
21 organohalides was greatly lower in Well No. 6 than  
22 in No. 4.

23 Q. Turn please to the October 15, 1976 letter.  
24 There is a statement there, and I recognize it is

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1 not your statement, but I want to read it, and I  
2 will ask you a question about it. In the second  
3 full paragraph of the letter from Mr. Jarema to Mr.  
4 Bean, it says, "The heavy use of Well No. 4 has  
5 established a cone of influence which includes the  
6 area affected by the hydro carbon pollutants end  
7 quote. Do you know what was the area that Mr.  
8 Jarema was referring to?

9 A. Not specifically, no.

10 Q. Had you had any discussions, in or about  
11 October, 1976, and leading up to your report of  
12 November 12, 1976, about the cone of influence  
13 established by the heavy use of Well No. 4?

14 A. No, we have not, not to my knowledge.

15 Q. Independently of Jarema's statements, did  
16 you at all, in preparing your report, consider the  
17 evidence of hydrocarbon contamination as affecting  
18 the conclusion that either Wells 4 and 6 were  
19 suitable for use?

20 A. Would you please repeat that question.

21 Q. I will rephrase it.

22 It is fair to say, is it not, that exhibit --  
23 Appendix C to your report contains data regarding  
24 hydrocarbon contamination in Wells 4 and 6?

1 A. Yes.

2 Q. Did you consider that data, in making your  
3 recommendations to use Wells 4 and 6 for public  
4 water supply?

5 A. We made no recommendations at that time  
6 regarding No. 4. We were concerned with No. 6,  
7 since that was the well that we had been involved  
8 with the construction.

9 Q. As of November 12, 1976, Well No. 6 had no  
10 pump station, did it?

11 A. That is correct.

12 Q. There was no permanent pump house?

13 A. That is correct.

14 Q. There were no turbines?

15 A. That is correct.

16 Q. There was no permanent electrical; is that  
17 right?

18 A. That is correct.

19 Q. Do you know how much cost had been expended  
20 on the construction of Well No. 6, as of November 12,  
21 1976?

22 A. Assuming that -- yes, I would say perhaps,  
23 all told, excluding the cost of land purchase,  
24 perhaps \$75,000.

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1 Q. Was the greater part of the expenditure in  
2 effect yet to come, namely the pump house and  
3 permanent installation?

4 A. Indeed.

5 Q. Did you consider the data that you were now  
6 privy to, in recommending the further construction  
7 of the pump station and pump house, and permanent  
8 installation of Well No. 6?

9 A. For what it was worth, certainly.

10 Q. And it was your considered recommendation  
11 that the Town of Southington go forward with the  
12 construction; is that right?

13 A. Indeed it was. Might I add some comment  
14 which would throw some light on the reason why this  
15 was our recommendation.

16 Q. You may.

17 A. On the completion of the testing of Well  
18 No. 6, in the fall of 1976, there was no evidence  
19 showed that the wells should not be used as a source  
20 of public water supply, and that a pumping station  
21 be constructed.

22 The Connecticut State Department of Health  
23 letter of October 25th, 1976, together with the  
24 Newlands Laboratory test results contained in



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1 Appendix B2 of our November 12, 1976 report, on the  
2 construction of Well No. 6, indicated that in fact  
3 we had an excellent quality of water based on the  
4 standards that were in effect at the end of 1976 for  
5 evaluating the quality of water supply.

6 It was not until 1977, that the  
7 contamination of groundwater supply by organic  
8 chemicals, started to emerge as a problem. It was  
9 not until the spring of 1978 that this -- that  
10 contamination by organic chemicals would become a  
11 problem in groundwater supply in the State of  
12 Massachusetts, which is comparable to Connecticut,  
13 in that today the two states have this same problem.

14 Finally, it was not until June of 1979,  
15 that the so-called snarls suggested, and adverse  
16 reaction level for organohalides, was established by  
17 the EPA. So that in our judgment, based on the yard  
18 sticks that were used to evaluate the quality of  
19 groundwater supply for public consumption, we had  
20 evidence to indicate that the water that we had  
21 found at Well No. 6 was indeed suitable.

22 Q. Was it any part of your recommendation that  
23 the contamination from organics in Well No. 4 was  
24 worse than that in Well No. 6?

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1           A.    Did we make mention of that in our report?  
2           I don't recall any conversation about that. This is  
3           a report on the construction of Well No. 6.

4           Q.    Was there a separate decision making  
5           meeting or exchange of correspondence at which a go  
6           ahead decision with respect to the pump station was  
7           made?

8           A.    Could you repeat that question?

9           Q.    Let me go back. You point out to me that  
10          your November 12, 1976 report, which we have marked  
11          as Amory Deposition Exhibit 7, is a report on the  
12          construction of Well No. 5; is that correct?

13          A.    Correct.

14          Q.    Was there another report, or was there a  
15          separate decision to go forward from November 12,  
16          1976, with construction of the pump station for that  
17          well?

18          A.    Yes.

19          Q.    And is that decision -- was that decision  
20          based on a recommendation of Walter Amory Consultant  
21          Engineers, that the Board of Water Commissioners  
22          should go forward with such construction?

23          A.    I have no idea what that decision was based  
24          on. It just so happens that this report includes

1 such a recommendation.

2 Q. Let me show you a letter which appears to  
3 be over your signature, dated October 14, 1976, to  
4 Mr. Bean, which I would like marked as the next  
5 exhibit.

6 (Document marked as Amory Deposition  
7 Exhibit 9 for identification)

8 Q. Mr. Amory, I am showing you the Amory  
9 Exhibit 9.

10 A. Yes.

11 Q. Do you have the counterpart of this in  
12 front of you now?

13 A. I believe I do, yes, sir.

14 Q. The letter appears to acknowledge a go  
15 ahead from Mr. Bean to prepare plans and  
16 specifications for the construction of the pumping  
17 station for Well No. 6. Do I understand the letter  
18 correctly?

19 A. Yes.

20 Q. And insofar as preparing plans and  
21 specifications, that go ahead had been given to you  
22 even before your November 12, 1976 report?

23 A. It would appear so, yes.

24 Q. It would also have been a go ahead that had

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1 occurred before you received the organohalides data  
2 from the State of Connecticut, by the October 25th,  
3 1976 letter?

4 A. Your statement of the chronology is correct,  
5 sir.

6 Q. My question is, was there any  
7 reconsideration, or any consideration given to going  
8 ahead with the pumping station after you had  
9 received the additional data on organohalides, and  
10 after your report of November 12, 1976?

11 A. The answer is yes. I am just trying to  
12 find the record of it. I assume that would be the  
13 next question, would it?

14 Q. Yes.

15 A. I did have a conversation with Mr. Bean  
16 subsequent to the receipt of the information on  
17 organohalides, subsequent to the submission of this  
18 report, subsequent to receipt of authorization to  
19 proceed with plans and specifications for the  
20 pumping station. I cannot remember the exact date.  
21 I can't readily put my hand on that in the file.

22 On the other hand, the conversation  
23 resulted in agreement between Mr. Bean and myself  
24 that indeed, because the Town of Southington needed

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1 the water and because there was no clear indication  
2 that we had a problem here, that indeed we should go  
3 ahead with the preparation of plans and  
4 specifications for the pumping station. I believe  
5 that was some time either in November or December of  
6 1976.

7 Q. Did in fact construction go forward, and  
8 did in fact your firm perform services in connection  
9 with it?

10 A. Yes, we did.

11 MR. RODBERG: I suggest we break for lunch  
12 now, and resume after the luncheon recess.

13 (Luncheon recess taken)  
14  
15  
16  
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23  
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AFTERNOON SESSION

1:28 p.m..

(Document marked as Amory Deposition  
Exhibit 10 for identification)

BY MR. RODBERG:

Q. Mr. Amory, the actual construction of the pump station for Well No. 6, what physical features did it entail?

A. The building consisted of a concrete block structure, with reinforced concrete foundation, and reinforced concrete roof slab, heated by electricity. Pumping equipment included a vertical turbine pump, right angle gear-drive electric motor, and a liquid propane gas fired engine.

Q. Can you give me the approximate dates --

A. Can I finish answering your question?

Q. If you have not finished, please continue.

A. In addition to pumping equipment, the pumping station included chemical feed equipment, namely a gas chlorinator, chlorine cylinder scale, chlorine injector booster pump, and a saturator, with chemical feed pump to provide the mandated fluoridation treatment.

The control of the pumping and chemical feed equipment was automated by instrumentation, and

1 individual to the pumping station, there was built a  
2 12-inch water main connection between the station  
3 and an existing town distribution main.

4 Q. Have you completed your answer?

5 A. That completes my answer, yes, sir.

6 Q. Can you give me the approximate dates of  
7 construction, that is when construction began, and  
8 when it was substantially completed?

9 A. Construction began during the spring of  
10 1977, and was substantially completed by the end of  
11 the year.

12 Q. During the period commencing with the  
13 spring of 1977, was your firm engaged by the Board  
14 of Water Commissioners with respect to water quality  
15 considerations as opposed to the supervision of  
16 construction in the -- I will call it the hard  
17 engineering involved with the pump station itself?

18 A. This would be beginning when?

19 Q. In the spring of 1977.

20 A. I wonder, Mr. Rodberg, if I could just add  
21 one additional response to your question regarding  
22 the physical features of the pumping station.

23 Q. Sure. Go ahead.

24 A. Namely that based on the water sampling

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1 results that had been received by the State  
2 Department of Public Health, and subsequent to the  
3 submission of the plans and specifications for the  
4 pumping station, the Department, by letter of  
5 January 18, 1977, approved the Well No. 6 and  
6 pumping station.

7 Q. Are you referring to a specific document  
8 when you mention such a specific date?

9 A. Yes, I am referring to a document from the  
10 State of Connecticut, State Department of Public  
11 Health, dated January 18, 1977, addressed to Mr.  
12 David A. Jacobsen, PE, Mr. Walter Amory Consultant  
13 Engineers, P.O. Box 1467, Duxbury, Massachusetts,  
14 02332, signed by Richard S. Woodhull, Chief, Water  
15 Supply Section, Environmental Health Services  
16 Division.

17 Q. May I see the letter you are referring to,  
18 please?

19 A. Sure.

20 Q. I wonder if at some point that is  
21 convenient to us all, we can arrange to have a copy  
22 of this provided to us, Mr. Amory?

23 A. I see no problem with that.

24 Q. I had asked a question about whether your



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1 firm was engaged to provide any other services  
2 beginning in the spring of 1977, such as in the area  
3 of water quality.

4 A. This would be in addition to services in  
5 connection with the construction of the well pumping  
6 station?

7 Q. Yes.

8 A. Well No. 6?

9 Q. Yes, sir.

10 A. Not during the spring of 1977, no.

11 Q. I have had a document marked off the record,  
12 which I will now refer to on the record, as Amory  
13 Exhibit 10, which is a letter with attachments,  
14 dated May 2, 1977, from Mr. William R. Hogan, of the  
15 Department of Environmental Protection, to Mr.  
16 Walter Armory, although I assume he means Mr. Amory,  
17 attention Mr. David Jacobsen.

18 Would you review that document and tell me  
19 whether you are familiar with the document, and what  
20 were the circumstances that led to the document  
21 being sent to you or your colleague, Mr. Jacobsen?

22 (Witness reviews document)

23 A. This document is essentially a compilation  
24 of water sampling results conducted by the

0006741

1 Department of Environmental Protection, an earlier  
2 sample of which was reportedly collected on  
3 September 16, 1976, this sample being the one which  
4 first showed the presence of organohalides, to the  
5 best of my knowledge. And I believe that the  
6 circumstances which led up to that sampling -- the  
7 circumstances was the fact that the State Department  
8 of Health did indeed pick up indication of  
9 organohalides during the second phase of the testing  
10 of Well No. 6.

11 Q. What was the involvement, though, of Walter  
12 Amory Consultants insofar as the transmittal of the  
13 data attached to Amory Exhibit 10?

14 A. Transmittal of the data from whom to whom,  
15 please?

16 Q. It appears to be a transmittal from the  
17 State DEP to your firm.

18 A. We were the recipients.

19 Q. What did you do, that is what did your firm  
20 do, with respect to this data or any other data, in  
21 the spring of 1977?

22 A. On April 18th, 1977, we wrote a letter to  
23 the Director of the Division of Water Compliance,  
24 DEP, pointing out the concern of the Southington

0006742

1 Waterworks Department regarding pollution -- or the  
2 need for pollution abatement, and the fact that  
3 Solvents Recovery had not taken sufficient action to  
4 abate this pollution, and expressed the Water  
5 Department's request that DEP give consideration to  
6 further requirements for pollution abatement  
7 facilities at Solvents Recovery.

8 Q. Sir, had there been some investigation or  
9 work on the part of Walter Amory Consultants, prior  
10 to April 18, 1977, which led to the letter of that  
11 date?

12 A. Not to my -- not that I recall. Unless you  
13 can come up with something there in the file. I  
14 have not been able to come up with anything in my  
15 file.

16 Q. You testified to an observation made from  
17 beyond the fence line in the mid summer of 1975, in  
18 Solvents' operation?

19 A. Yes.

20 Q. Now we have reference to a letter of April  
21 18, 1977. Between those two dates, what if anything  
22 did your firm do in connection with -- I will try to  
23 use your words -- pollution from Solvents Recovery  
24 Service, or pollution abatement?

0006743

1           A.     Well, my letter of August 11, 1976, we  
2 wrote Mr. Robert Taylor, Director of the Division of  
3 Water Compliance, DEP, pointing out that the  
4 Department of Health had detected lead and mercury  
5 in the analysis of water samples which they had  
6 taken during the test well work.

7                     And we also pointed out to Mr. Taylor that  
8 we were concerned about the source of pollutants,  
9 and that the source should be determined. We did  
10 point out one potential source as being Solvents  
11 Recovery Service of New England.

12                    In essence, the purpose of this letter was  
13 to try to encourage the DEP to do further test work.  
14 And I would say that pursuant to this letter, this  
15 test work was done, the results of which you have  
16 just shown me.

17           Q.     And just so the record is clear, the  
18 results that you just referred to would have been  
19 the Amory Exhibit 10 results transmitted to you by  
20 DEP?

21           A.     Transmitted to Amory Engineers by DEP; that  
22 is correct.

23           Q.     Subsequent to May 2nd, 1977, did your firm  
24 have a continuing involvement in working either with

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1 the State DEP, or the Town of Southington, with  
2 respect to identifying sources of pollution?

3 A. Yes.

4 Q. Did you have a separate contract for those  
5 services? Do you understand my question?

6 A. Yes, I understand your question.

7 Q. I mean separate from the work on the  
8 development of Well No. 6?

9 A. Yes. Yes, we did.

10 Q. Do you have a copy of that with you today?

11 A. I have a copy of a letter dated June 21,  
12 1978, addressed to Mr. Bean, signed by me, Walter  
13 Amory, stating that it is our understanding at the  
14 time that the Water Commissioners had authorized us  
15 to proceed with engineering work associated with  
16 test well monitoring in the vicinity of Well No. 6,  
17 and incidentally, some other work not related to the  
18 Well No. 6 area.

19 Q. May I see that letter, please?

20 A. Surely.

21 Q. Turning your attention, however, from the  
22 period to May 2nd, 1977, through the period June 21,  
23 1978, what work, if any, did your firm do in  
24 connection with either monitoring of the wells in

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1 the vicinity of Wells 4 and 5, or identifying  
2 sources of pollution more generally?

3 A. We were asked to review the results of  
4 analysis of samples for lead and mercury, taken from  
5 Well No. 6, and the adjacent test wells. This work  
6 went up through about the middle of January of 1978.  
7 That did not involve any actual testing on our part,  
8 however, but rather the monitoring of the results of  
9 testing for the presence of lead and mercury.

10 In addition, during the period from about,  
11 oh, August of 1977, through the period June of 1979,  
12 we supervised and directed a test well monitoring  
13 program to identify the source and the movement of  
14 groundwater contaminants in the vicinity of Well No.  
15 6.

16 Q. Did you limit your inquiry, in the period  
17 August, 1977, through June of 1979, to sources and  
18 movements of groundwater contamination in the  
19 vicinity of Well No. 6, or did you also include Well  
20 No. 4?

21 A. Well No. 4 being within 500 feet of Well  
22 No. 6, we also included a look at Well No. 4.

23 Q. Did your firm prepare any written reports  
24 of its work at any time relating to the period

1 May, '77 through June of '79?

2 A. Yes.

3 Q. Do you have such a report or reports with  
4 you today?

5 A. I believe I do.

6 Q. Would you identify them by date, first of  
7 all. And then if I may, I would like to see them.

8 A. I am not sure as I can give them to you in  
9 chronological order. But perhaps the thing to do  
10 would be to start with the most recent, and work  
11 back.

12 The most recent report on groundwater  
13 contamination in the vicinity of Wells 4 and 6, is a  
14 report addressed to Mr. Daniel C. Christy, dated  
15 June 18, 1979. Do you want to see these in sequence,  
16 or or all at once?

17 Q. I think I will probably look at them all at  
18 once. Because as you give me the dates, I will see  
19 if I already have copies.

20 (Discussion off the record)

21 A. That was the June 18, 1979 report.

22 (Discussion off the record)

23 Q. I believe I have a copy of that.

24 A. Oh, you have that one?

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1 Q. Yes. Would you verify that they appear to  
2 be the same? Then I will mark the copy that I have.

3 A. Yes, that is the same.

4 MR. RODBERG: Let's have the report of June  
5 18, 1979, marked as the next Amory deposition  
6 exhibit.

7 (Document marked as Amory Deposition  
8 Exhibit 11 for identification)

9 A. The next one, going back again, is dated  
10 August 8, 1978, addressed to Mr. Daniel C. Christy.  
11 This essentially is a status report on halogenated  
12 organic groundwater in the vicinity of Wells 4 and 6.

13 Q. Before we go on. I think it would be  
14 easier if you could take a look at the document I am  
15 showing you, and verify this it is the same as the  
16 one you just mentioned from your files.

17 A. Indeed you have done your homework; same  
18 one.

19 MR. RODBERG: Let's have that marked as  
20 Amory Deposition Exhibit 12.

21 (Document marked as Amory Deposition  
22 Exhibit 12 for identification)

23 MR. RODBERG: I realize that Mr. Amory is  
24 going through his files, and is taking letter



1 reports out. I am just going to alert him to the  
2 fact that I also have a document that fits the same  
3 general description as the documents he has so far  
4 identified, dated November 13, 1978.

5 Q. My question is would you classify that as a  
6 report within the scope of the work on groundwater  
7 contamination that you were doing?

8 A. Yes. This letter of November 13, 1978, is  
9 essentially a letter containing recommendations on  
10 the establishment of sampling procedures. Naturally,  
11 when you are getting into a problem like this, and  
12 the scope of what you are getting into is not clear  
13 at the outset, you have to make adjustments in your  
14 program as you go along. I believe that was the  
15 essence of that letter.

16 MR. RODBERG: For the record, let's mark  
17 the November 30, 1978 letter, from Walter Amory  
18 Consultant Engineers, to Daniel Christy, as Exhibit  
19 Amory 13.

20 (Document marked as Amory Deposition  
21 Exhibit 13 for identification)

22 Q. I am waiting for you to identify the  
23 reports that you rendered to the Board of Water  
24 Commissioners regarding your activities in

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1 groundwater --

2 A. I think you have them all.

3 Q. Thank you. If any come up that we have  
4 missed, I understand you have voluminous files  
5 there, and I may have a letter or two that you would  
6 regard as a report, and get into those. I want to  
7 go back, then, in time a little bit.

8 You have identified, that at least on May  
9 2nd, 1977, you were receiving a recapitulation lakes  
10 of the sampling to date; that is Amory Exhibit 10?

11 A. Yes.

12 Q. Do you recall a time, in the summer of 1977,  
13 when you had discussions regarding some additional  
14 monitoring wells at the north edge of Well No. 6  
15 well field?

16 A. I do.

17 Q. Tell me who those discussions were with,  
18 and what was the outcome of them?

19 A. Those discussions were with John Bean, and  
20 they related to the need for installing additional  
21 2 1/2-inch test wells in the area adjacent to Wells  
22 4 and 6, as well as the area to the north of Well  
23 No. 6, for the purpose of identifying the source and  
24 the travel of groundwater contaminants.

1 Q. Were you concerned at all, sir, of  
2 affecting groundwater quality once Well No. 6 went  
3 into service?

4 A. Would you restate that question, please?

5 MR. RODBERG: Well, let me first -- I am  
6 referring to a letter. The letter is not to you or  
7 from you. I am just trying to ask you if you recall  
8 whether you have had discussions on certain subjects?  
9 I will have the letter marked and show it to you,  
10 and that might help clarify my questions.

11 This is a letter from Paul Marin to John  
12 Bean, dated July 1, 1977.

13 (Document marked as Amory Deposition  
14 Exhibit 14 for identification)

15 Q. I have had that letter marked as Amory  
16 Exhibit 14. Mr. Marin refers to a meeting at which  
17 Dave Jacobsen of Walter Amory, was in attendance on  
18 June 30, 1977. In the course of the letter, he  
19 makes the statement that, "As discussed at the  
20 meeting, the Water Department will install two  
21 monitoring wells at the north edge of the Well No. 6  
22 well field, in order to document existing water  
23 quality there and to act as monitors of changes in  
24 ground water quality once pumping commences at Well

0006751

1 No. 6."

2 Do you recall discussions with anyone  
3 concerning changes in groundwater quality once Well  
4 No. 6 began pumping?

5 A. Groundwater quality where?

6 Q. In the vicinity of Well No. 6.

7 A. Yes.

8 Q. Who were those discussions with?

9 A. John Bean.

10 Q. Did you express some concern?

11 A. I did.

12 Q. What was the concern you expressed to Mr.  
13 Been concerning changes in groundwater quality once  
14 pumping commenced at Well No. 6?

15 A. That there would be the potential for  
16 migration of pollutants towards Well No. 6.

17 Q. And was it one of your suggestions, or  
18 perhaps someone else's, that monitoring wells be  
19 installed north of Well No. 6?

20 A. This was our suggestion.

21 Q. Do you know whether that was done?

22 A. Yes, it was.

23 Q. Do you know the label or name given to the  
24 wells installed, and who did it, and when?

1           A.    I do know that I can give you that  
2 information, yes.

3           Q.    Could you please. If it is by reference to  
4 a document, could you tell me the document.

5           A.    This is the document on which these wells  
6 are located. And to identify the document, this is  
7 Figure No. 1, prepared by the Town of Southington  
8 Waterworks Department, map showing pipe lines on  
9 Curtis Street property, dated 12-28-78. And, to the  
10 best of my knowledge, all of the test wells that  
11 were used to monitor the presence of organics in the  
12 groundwater, adjacent to Wells 4 and 6 and to the  
13 north of Well No. 6, are shown on this plan.

14          Q.    My question relates specifically to two  
15 wells referred to in that July 1, 1977 letter. Do  
16 you know what number or nomenclature they were given?

17          A.    Well, if I could know which wells you were  
18 referring to, I could identify them by number.

19          Q.    But you are not able to answer my question?

20          A.    No.

21          Q.    Do you recall being involved, sir, in the  
22 course of your work, in discussions about two  
23 backhoe pits to be placed at the boundary between  
24 the Cianci property and the Water Company property?

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1 MR. RODBERG: I will show you a letter also  
2 on that subject, from Paul Marin to John Bean, dated  
3 November 14, 1977, which I will mark for  
4 identification.

5 (Document marked as Amory Deposition  
6 Exhibit 15 for identification)

7 Q. I am showing you Amory Exhibit 15. I  
8 wonder if it helps you, or independently of that you  
9 can recall some discussion about backhoe pits to be  
10 located at the Cianci Water Company property  
11 boundary?

12 A. I recall some discussion about these test  
13 pits. I have never seen the test pits. And I don't  
14 believe that Amory Engineers was actually consulted  
15 on any of the details involving their construction.

16 Q. Do you know whether indeed they were ever  
17 constructed?

18 A. Not for sure.

19 Q. Was it part of the services that you were  
20 rendering to the Board of Water Commissioners to  
21 attend meetings from time to time with  
22 representatives of the State in connection with the  
23 contamination of Wells 4 and 6?

24 A. Yes.

1 Q. Did you keep minutes of meetings in the  
2 regular course of your activities at such meetings?

3 A. Yes.

4 Q. I want to address yourself to a specific  
5 meeting on a specific date. I happen to have notes  
6 of a conference. I am not sure who prepared them.  
7 I will tell you that the date is December 21, 1977.

8 And first let me ask you whether  
9 independent of this document, you have some other  
10 notes or minutes of the meeting?

11 (Witness reviews document)

12 A. This is the only document that I recall  
13 which indicates what went on at that meeting. I  
14 believe Mr. Taylor of our office -- I am sorry -- I  
15 stand corrected. I was at that meeting with Mr.  
16 Taylor of our office.

17 MR. RODBERG: Let me have the notes of  
18 conference, dated December 21, 1977, marked as the  
19 next exhibit for identification.

20 (Document marked as Amory Deposition  
21 Exhibit 16 for identification)

22 Q. Do you recall discussion, either at that  
23 that meeting or around that time, about the sources  
24 of contamination to Well No. 4?

1 A. Yes.

2 Q. What were the discussions, as best you can  
3 recall?

4 A. Well, to be honest with you, sir, I cannot  
5 recall any discussions that are not reported on this  
6 notes of conference.

7 Q. Have you reviewed the notes of conference  
8 that I have marked?

9 A. I have looked them over, yes.

10 Q. Is there anything in the notes that you  
11 recall as not having occurred either the way it is  
12 presented, or not having occurred in your presence?

13 A. In other words, are you asking me if the  
14 notes of conference are inaccurate?

15 Q. Yes.

16 A. This was four years ago. I simply cannot  
17 answer the question.

18 MR. RODBERG: I am going to have marked  
19 next another conference notes, this one of January  
20 18th, 1978, also in the same format, showing Mr.  
21 Amory's presence.

22 (Document marked as Amory Deposition  
23 Exhibit 17 for identification)

24 Q. First, Mr. Amory, do you have, independent



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1 of this document I have had marked as Amory  
2 Deposition Exhibit 17, any notes in your own files  
3 of a conference of that date --

4 A. No.

5 Q. -- with representatives of the State?

6 A. No, not to my knowledge.

7 Q. Would you please review the document, and  
8 does it appear to be a substantially accurate  
9 representation of the meeting as you recall it?

10 (Witness reviews document)

11 A. Again, with the caveat that this meeting  
12 was over -- it was almost four years ago, I find  
13 that the minutes -- the notes of conference reflect  
14 what transpired at that meeting.

15 Q. At the bottom of the first page, in the  
16 section headed, "Introduction," the sentence begins --  
17 I will read the whole paragraph. Southington  
18 Waterworks Department Well No. 4 is contaminated  
19 with organohalides. Small amounts of organohalides  
20 have been detected in others of the Town's wells.  
21 Well No. 6 is of particular concern, because it is  
22 between Well No. 4 and the apparent source of  
23 contamination. The apparent source consists of two  
24 old sludge lagoons on the property of Solvents

1 Recovery. The exact path of travel of the  
2 contamination has not been established. However,  
3 the sludge lagoon is only about 2,000 feet from Well  
4 No. 6." I will go back to that.

5 Do you recall discussion as to the amounts  
6 of organohalides in other of the Town's wells?

7 A. No.

8 Q. Do you have any data as to the testing of  
9 wells other than 4 and 6 for organohalides in the  
10 Town of Southington?

11 A. I believe I do, but that was subsequent to  
12 January 18, 1978.

13 Q. Do you have any recollection of any data  
14 having been presented either at the January 18th  
15 meeting, or previous to that, concerning  
16 organohalides levels in other town wells?

17 A. No, I don't, not prior to or on January 18,  
18 1978.

19 Q. The statement, "The apparent source  
20 consists of two old slug lagoons on the property of  
21 Solvents Recovery," was the discussion at that time  
22 concerned with the source of contamination to Well  
23 No. 6 alone, or to Well No. 4 alone, or to both?

24 A. At that time it was -- both wells were of

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1 concern, both 4 and 6.

2 Q. The reference to "the apparent source" is  
3 then a reference to Solvents Recovery as the  
4 apparent source to both wells; is that right?

5 A. I cannot answer that question. I just  
6 don't know.

7 Q. Do you recall a time subsequent to January  
8 18, 1978, when --

9 A. Excuse me. What was that? How did you  
10 start that off?

11 Q. Do you recall whether subsequent to January  
12 18, 1978, Walter Amory Consultant Engineers  
13 expressed a different opinion as to the source of  
14 contamination to Well No. 4?

15 A. During the monitoring period, the picture  
16 changed as we went along. As of January 18, 1978,  
17 it might well have appeared that the slug lagoons on  
18 the property of Solvents Recovery were in fact the  
19 source of contamination for both wells. We had not  
20 done very much testing for the presence and location  
21 of organohalides as of January 18, 1978.

22 Subsequent to that date, we did a lot more  
23 testing, and we did indeed discover that besides  
24 this particular source of contamination, there

1 appeared to be other sources of contamination.

2 Q. Did that additional testing and analysis  
3 lead to your report of August 8, 1978, which we have  
4 marked as Amory Exhibit No. 12?

5 (Discussion off the record)

6 THE WITNESS: All right. If you would be  
7 good enough to ask me the question again.

8 (Question read back)

9 A. Yes. The answer is yes.

10 Q. Do you have a copy of your report of August  
11 8? Because I have several more questions on that,  
12 that I would like to ask.

13 (Discussion off the record)

14 Q. Would you please refer to the last page of  
15 Amory Exhibit 12.

16 A. Yes, sir.

17 Q. It says, "It is our understanding that the  
18 Department does not use Well No. 4, and is using  
19 Well No. 6 only as necessary to meet peak demand.  
20 We concur with this approach. And it is our  
21 understanding that the State Health Department also  
22 concurs."

23 What was the purpose of not using Well No.  
24 4, and using No. 6 only as necessary to meet peak

1 demand?

2 A. Because there was a higher concentration of  
3 chlorinated organics in Well No. 4 at the time, than  
4 there were in Well No. 6.

5 Q. Do you know when Well No. 4 ceased to be  
6 used?

7 A. Not exactly, no.

8 Q. Do you know when Well No. 6 first began to  
9 be used?

10 A. Not exactly. But I think around the  
11 January of 19 -- around January of 1978, Well No. 6  
12 went into service.

13 MR. RODBERG: Let me mark as the next  
14 exhibit, a letter of August 10, 1978, from Walter  
15 Amory Consultant Engineers, to Daniel Christy.

16 (Document marked as Amory Deposition  
17 Exhibit 18 for identification)

18 Q. I noticed this as I was going through.  
19 Take a look at Amory Exhibit 18. Is that another  
20 report on the same subject as the Amory Exhibit 12?

21 A. Have I seen this one before?

22 Q. No. I am showing that document to you for  
23 the first time.

24 A. What was the question again?

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1 Q. Is that part of the same subject matter,  
2 the continued involvement with the organohalide  
3 contamination in Wells 4 and 6?

4 A. Yes.

5 Q. Now, in the August 8th and August 10th  
6 letters, I see a Mr. Daniel Christy's name mentioned  
7 for the first time, instead of Mr. Bean. Do you  
8 recall when Mr. Bean exited and Mr. Christy entered  
9 the picture?

10 A. I cannot remember exactly. But my guess  
11 would be some time during the summer of 1978.

12 Q. Do you know whether Mr. Bean continued at  
13 all to be involved after August of '78?

14 A. I have no idea.

15 Q. There is a recommendation, in Amory  
16 Deposition Exhibit 18, and I will read it,  
17 "Accordingly we recommend that the Department pump  
18 Well No. 4 to waste for an extended period in order  
19 to one, observe if the contamination will decrease  
20 with time; and two, 'curtain' the contamination and  
21 reduce the chance of its reaching Well No. 6." And  
22 that was the recommendation of Walter Amory to the  
23 Southington Waterworks Department?

24 A. I have lost track of these numbers. What

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1 is the date of the letter, sir?

2 Q. I am referring to the August 10, 1978  
3 letter.

4 A. What page are you referring to?

5 Q. The middle of the first page, the third  
6 full paragraph.

7 A. All right.

8 Q. I want to ask you some questions about that  
9 recommendation.

10 A. Fire away.

11 Q. When you say, you use the word "curtain,"  
12 and it is in quotations, what do you mean by "curtain  
13 the contamination"?

14 A. Contain.

15 Q. What contamination was going to be  
16 contained by the pumping of waste to Well No. 4?

17 A. Contamination which would normally flow --  
18 correction -- migrate through the ground from  
19 wherever the source might be, over to Well No. 6.  
20 And in the process of flowing over towards No. 6,  
21 pass through the vicinity of No. 4.

22 Q. Did the recommendation concerning pumping  
23 Well No. 4 to waste have anything to do with any  
24 sources of contamination to Well No. 6 -- north of

1 the well?

2 A. Yes, it did.

3 Q. What effect did you anticipate that your  
4 recommendation of pumping Well 4 to waste would have  
5 on contaminants north of Well No. 6?

6 A. Pumping from No. 4 to waste would tend to  
7 divert the flow of contaminants coming in from the  
8 north.

9 Q. And pumping 4 to waste would divert  
10 contaminants from the north in what direction and  
11 from what direction?

12 A. Would you repeat that question, please.

13 Q. You said that the pumping to waste would  
14 divert contaminants?

15 A. Yes.

16 Q. I am asking from where to where would it  
17 divert contaminants?

18 A. Into the river.

19 Q. From where?

20 A. From the ground.

21 Q. From the ground north of Well No. 4?

22 A. From the ground north of Well No. 4.

23 Q. And from the ground north of Well No. 6 as  
24 well?



1           A.     Absolutely.

2           Q.     Did you expect, in your recommendation,  
3           that contaminants would be drawn within the cone of  
4           influence of Well No. 6?

5           A.     Would you repeat that, please.

6           Q.     When you made the recommendation, in August  
7           of 1978, to pump Well No. 4 to waste, did you expect  
8           at that time that any contaminants north of Well No.  
9           6 would be drawn within the cone of influence of  
10          Well No. 6?

11          A.     Indeed; otherwise we would not have pumped  
12          No. 4.

13          Q.     One of your recommendations in the  
14          paragraph following the letter of August 10, 1978,  
15          is that, "A pumping test should be performed on Well  
16          No. 4 in order to determine how many hours per day  
17          the well need be pumped to act as an effective  
18          curtain. We suggest that until this test can be  
19          performed and results analyzed, that Well No. 4 be  
20          pumped to waste whenever Well No. 6 is operating."

21                 Do you know whether your recommendation was  
22          followed?

23          A.     I really don't. I cannot answer that.

24          Q.     Do you have any data of any pumping tests

1 having been performed on Well No. 4, at or  
2 subsequent to August 10, 1978?

3 A. I know this was done, but I don't believe  
4 we have any records.

5 Q. What determines how much or how long  
6 pumping has to occur to act as an effective curtain?

7 A. Monitor the results obtained from the test  
8 work, and the testing -- the pumping of Well No. 4.

9 Q. When you say "monitor," you mean monitor  
10 for contaminants?

11 A. Yes.

12 Q. What would you expect to find in the data  
13 on contaminants which would indicate how many hours  
14 per day one needs to pump to be an effective curtain?

15 A. We never really had the chance to go  
16 through this to get the handle required to answer  
17 your question. Our work terminated as of June of  
18 1979, and as of this date, we simply did not have  
19 enough hard information to come up with firm  
20 recommendations on what was going on, and how the  
21 wells should be operated.

22 Q. Was any aspect of your recommendation  
23 followed with respect to the pumping to waste?

24 A. Yes, I believe it was.

1 Q. What aspects were followed and what aspects  
2 were not?

3 A. I believe that Well No. 4 was indeed pumped  
4 to waste. In fact it was pumped into the Quinnipiac  
5 River.

6 Q. Let me refer you to the document that we  
7 marked as Amory Deposition Exhibit 13, which you  
8 identified from your records. This is dated  
9 November 13th, 1978.

10 A. This is a letter?

11 Q. Yes. That's right. Strike that. I have  
12 the wrong one.

13 Instead I meant to refer you to Amory  
14 Exhibit 11, which is your June 18, 1979 report.  
15 Here you make the recommendation, "We recommend  
16 production Well No. 4 be pumped to waste  
17 approximately 20 hours per day, instead of the  
18 previously recommended pumping coincident with  
19 production Well No. 6." I want you to review the  
20 entire letter.

21 (Witness reviews document)

22 Q. I take it your first recommendation, in  
23 August, was to pump 4 to waste whenever 6 was  
24 operating?

1           A.     That's what the letter says; you take it  
2 right.

3           Q.     Well, I am trying to understand your words  
4 as you used them then, in the context of what was  
5 happening. Then you obtained additional data over  
6 the next several months. And in June of 1979, you  
7 made a change in your recommendation?

8           A.     Yes.

9           Q.     This time it was to pump 20 hours a day out  
10 of 4, regardless when 6 was operating?

11          A.     Yes.

12          Q.     What prompted the change, and what data did  
13 you rely on to make the recommended change?

14          A.     I believe the reason for that recommended  
15 change was that we did discover that there was some  
16 high concentrations of pollutants, contaminants, in  
17 the area adjacent to No. 4. And that the most  
18 effective way to flush them out was to pump No. 4 to  
19 waste 20 hours a day.

20          Q.     In your recommendation of June, 1979, did  
21 you at all consider the impact of that pumping on  
22 any contaminants north of Well No. 6?

23          A.     Contaminants north of Well No. 6 were a  
24 continual concern. Indeed we did.

1 Q. What affect did you expect would happen if  
2 you pumped Well No. 4 20 hours a day, as you  
3 recommended?

4 A. That the cone of influence would reach out  
5 further than if we pumped it for shorter periods.

6 Q. Were you involved at all in an application  
7 by the Town of Southington for a DESAPD permit?

8 A. Yes.

9 Q. Discharge to waste?

10 A. Yes, we did.

11 Q. Was in fact the application for that  
12 prepared more or less by you as consultants for the  
13 town?

14 A. Yes.

15 MR. RODBERG: I am going to have what  
16 appears to be a copy of that application, dated  
17 January 10, 1979, marked for identification.

18 (Document marked as Amory Deposition  
19 Exhibit 19 for identification)

20 Q. Mr. Amory, I am going to show you the  
21 application. Would you take a look at it and see if  
22 you can verify that is in fact a copy of the  
23 application that you were involved in preparing?

24 (Witness reviews document)

1 A. Yes, I believe if is.

2 Q. From your recollection of the events, did  
3 the actual physical pumping to waste commence prior  
4 to the application being filed in January, 1979?

5 A. I cannot remember the actual sequence of  
6 events in that regard.

7 Q. Do you have a recollection that there was  
8 some period during which there was pumping to waste?

9 A. There could have been. I just cannot  
10 remember.

11 Q. Do you recall ever seeing it?

12 A. Seeing what?

13 Q. Pumping to waste from Well No. 4?

14 A. No, I do not.

15 Q. When you began identifying your reports to  
16 the Board of Water Commissioners, you started  
17 backwards with the June 18, 1979 report.

18 A. Yes, sir.

19 Q. Which we have discussed. Is that the last  
20 substantive communication you had in connection with  
21 your work for the Board of Water Commissioners?

22 A. June 19, 1979?

23 Q. June 18.

24 A. June 18?

1 Q. Yes.

2 A. Yes, it was; to the best of my knowledge,  
3 that is.

4 Q. Did your work terminate with that report,  
5 June 18th, 1979?

6 A. I believe it did.

7 Q. Have you been engaged subsequently in  
8 behalf of the Board of Water Commissioners to  
9 provide any consulting services?

10 A. Yes.

11 Q. Have those consulting services at all  
12 involved groundwater contamination in and about  
13 Wells 4 and 6?

14 A. No.

15 Q. Do you know whether, as of June 18, 1979,  
16 Well No. 4 was being pumped to waste?

17 A. I do not know.

18 Q. Do you recall attending a public hearing,  
19 with respect to the permit application, on April 26,  
20 1979? Not that there is any significance to that  
21 date. That just happens to be the date. Do you  
22 recall the public hearing?

23 A. No, I don't. I don't recall having  
24 attended that hearing, no.

1 Q. Did you ever review the findings with  
2 respect to the permit application?

3 A. I believe I have, yes.

4 MR. RODBERG: Let me show you what is an  
5 interdepartment message, but purports to be a report  
6 of a public hearing, dated April 26, 1979.

7 (Document marked as Amory Deposition  
8 Exhibit 20 for identification)

9 Q. I am showing you now that document, which  
10 has been marked as Amory Exhibit 20. Have you ever  
11 seen the report, either in that format as a memo, or  
12 perhaps as a separate document, sir?

13 (Witness reviews document)

14 A. I believe I have seen that, yes.

15 Q. When you first received it, did you agree  
16 or disagree with any of the findings presented in  
17 the form, based upon your own experience?

18 A. I don't believe I did.

19 Q. You had no conclusions either way with  
20 respect to the findings?

21 A. Only that the permit had been granted.  
22 That was the prime effort.

23 MR. RODBERG: I have no further questions.  
24 Thank you, sir.